

A SUMMARY AND ANALYSIS OF LAWS REGULATING THE PRODUCTION OF PORK IN IOWA AND OTHER MAJOR PORK PRODUCING STATES

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I. INTRODUCTION

A. *Background Information and Industry Trends*

The regulation of pork producers, and the pork industry as a whole, is one of the most important and controversial issues in agricultural law today. Every major pork producing state has dealt with the issue during the last few years, and most of the states have made substantial changes in their laws regulating pork production. The driving forces that have caused state legislatures and regulatory agencies to re-examine and revise their laws and regulations over the past few years have been similar in all the states, although in varying degrees. The major driving forces have been, and continue to be, environmental concerns about water quality and odors, structural and social concerns over vertical and horizontal integration trends, and economic issues such as adding value to agricultural products and competing with other states and countries to become the most efficient producers of pork in the world.

The issue is particularly important in Iowa. Iowa leads the nation in pork production in terms of both the number of hogs marketed annually and the size of its breeding herd. In 1996, Iowa marketed over 22.2 million head of hogs, which is about 22% of the nation's hogs.¹ The closest competitors to Iowa were North Carolina (13.3 million head), Minnesota (9.2 million head), Illinois (8.3 million head), Indiana (6.9 million head), Nebraska (6.4 million head), and Missouri (5.9 million head).² In addition to the top seven states, ten other states marketed over a million head of hogs in 1996. Those states were Ohio (3.2 million), South Dakota, Kansas, and Arkansas (all more than 2 million head), and Pennsylvania, Michigan, Georgia, Wisconsin, Oklahoma, and Kentucky (all more than 1 million head).³ Iowa also led in breeding herd numbers at 1.2 million head in 1996,⁴ but North Carolina

¹. See Joe Vansickle, *Market Shifts Create New Hog Powerhouse States*, NAT'L HOG FARMER, May 15, 1997, at 12.

². See *id.*

³. See *id.*

⁴. See Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 16.

might take the lead in 1997 as it farrowed more sows this winter, 1996-1997, than Iowa.⁵

The geographic trends in the pork industry are also worth mentioning because they have a direct impact on the laws being passed in the various states and regions of the country. During the last five years, North Carolina has been the big economic winner as its breeding herd increased 171%, its share of marketed hogs increased 122%, and its total market share increased 124%, which includes sales of feeder pigs and seed stock.⁶ North Carolina's explosive expansion seems to have ended, especially with a recently passed moratorium on new construction and expansion until March 1, 1999.⁷ The states in the South and West are picking up much of the new expansion, particularly in breeding herd numbers.⁸ From 1990 to 1995, Oklahoma increased its breeding herd by 359%, Wyoming by 355%, Utah by 300%, Colorado by 187%, and Arkansas by 22%.⁹

From 1990 to 1995, almost all of the states in the traditional hog belt (Upper Midwest) saw a decline in hog numbers and market share.¹⁰ Minnesota is the only state that increased its total market share, by 8%, partly because its breeding herd has been kept stable at only a 1% drop.¹¹ Meanwhile, South Dakota lost 26% of its breeding herd, Illinois lost 22%, Iowa lost 15%, Indiana lost 14%, and Nebraska lost 6%.¹² Each state that lost breeding herd numbers had a double digit decline in total market share, except Iowa which lost only 8%.¹³ Missouri increased its total market share by 13% while increasing its breeding herd numbers by 19%.¹⁴

These trends are very important to Iowa (and every other state with pork production) because of the impact the pork industry has on the economic strength and the social structure of Iowa. Iowa's highly productive land will always be a source of revenue at the bottom of the chain, because its abundant supplies of corn and soybeans will be used by those who raise hogs. By finishing hogs in the state, however, Iowans will retain a larger share of the value-added pork dollars (not to mention processing and marketing finished products). Likewise, if Iowa can raise the crops, finish the hogs, *and* farrow the hogs, then largest piece of the economic pie will stay in Iowa for Iowa's farmers and supporting businesses.

⁵. See Joe Vansickle, *Market Shifts Create New Hog Powerhouse States*, NAT'L HOG FARMER, May 15, 1997, at 12.

⁶. See *id.*

⁷. See Clean Water Responsibility and Environmentally Sound Policy Act, H.B. 515, § 1.1(a), 1997 N.C. Sess. Laws 458.

⁸. See Joe Vansickle, *Market Shifts Create New Hog Powerhouse States*, NAT'L HOG FARMER, May 15, 1997, at 12.

⁹. See *id.* at 14 tbl.2.

¹⁰. See *id.* at 14 tbl.3.

¹¹. See *id.* at 14.

¹². See *id.* at 14 tbl.3.

¹³. See *id.*

¹⁴. See *id.*

Iowa excels in all three phases, but has recently lost ground in farrowing. In the 1980s, Iowa had a sow herd of more than 2.0 million, but by December 1996 that number had fallen to only 1.25 million sows.¹⁵ The number of sows in March 1997 was back up to 1.3 million sows, but that is still far from the numbers Iowa had in the 1980s.¹⁶ The trend can also be shown by looking at the number of feeder pigs Iowa imports. In 1990, Iowa imported approximately one million feeder pigs from other states.¹⁷ By 1996, however, Iowa imported a record 4.52 million feeder pigs and the imports for 1997 are projected to be more than 5.0 million feeder pigs (almost a quarter of the annual number of pigs marketed in Iowa).¹⁸ Because farrowing requires even more labor and inputs than finishing-only operations do, finishing and farrowing pigs can provide a strong one-two value-added punch for Iowa's abundant corn and soybean crops. In 1995 alone, the total direct and indirect economic effects of the Iowa pork industry were estimated to be \$11.4 billion in gross sales, employment of 90,000 people, and the addition of more than \$3 billion of value-added revenue to Iowa's economy.¹⁹

The impacts of the pork industry on Iowa's social structure have also been very important and are related to the economic benefits mentioned above. First, many of the farmers who survived the poor agricultural economy of the 1980s (poor cattle market, low crop prices, and low land values) and who are farming today, survived by farrowing and finishing hogs. The fairly profitable hog industry kept the number of farmers from decreasing dramatically and helped keep rural communities strong both in terms of economics and population. The large number of independent, middle-class farmers supported much of the rural infrastructure, especially main-street businesses, schools, and other community groups. Hog farms do not necessarily require a lot of land, but they do require substantial amounts of labor and inputs, such as veterinarians, feed suppliers, bankers, farm suppliers, farm equipment dealers, fuel suppliers, electricians, construction workers, and other accompanying businesses. The entire state, including cities, continues to reap the benefits of a strong rural economy and unique social structure created by having many smaller communities, businesses, and schools.

B. Purpose

This Note has an Iowa focus because a substantial portion of the research and writing was done while the author served as a law clerk during the summer of 1997 in the Environmental and Agricultural Law Division of Iowa Attorney General Tom

15. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, May 26, 1997, at 17.

16. See *id.*

17. See *id.*

18. See *id.*

19. See John Lawrence et al., *Economic Impact of a Livestock Bonding Requirement*, IOWA PORK PRODUCERS, June 1997, at 9.

Miller's office. The original goal was to discover how Iowa's pork production laws and regulations compared with other states, particularly in the areas of environmental laws, nuisance protection, permitting procedures, corporate restrictions, enforcement, and local control. In the process, the hope was that new ways to improve Iowa's laws could be found in other states' laws. This was done in preparation for next year's legislative session when changes to Iowa's laws surrounding pork production are likely. As the project progressed, it became apparent the information would be useful, not only in Iowa, but in other states contemplating revisions or additions to their laws (which includes almost every major pork producing state). The author then decided to write and publish this Note so that the information could be used as a resource for anyone interested in, or involved with, laws and regulations surrounding the pork industry in the United States.

It should also be noted that this Note is the product of the author's research. Views and opinions expressed in this Note are those of the author only and do not necessarily reflect the views or opinions of Iowa Attorney General Tom Miller or his office.

C. Overview

This Note summarizes five basic areas of law related to pork production in many of the major pork producing states, including Iowa, North Carolina, Minnesota, Illinois, Indiana, Nebraska, Missouri, South Dakota, and Oklahoma. Information on the laws in some other states, particularly Kansas and Michigan, have been added when appropriate to show novel approaches to certain issues. The five areas of law covered are as follows: permitting requirements, water quality laws, odor and nuisance laws, enforcement procedures and local control, and corporate farming restrictions.

II. PERMITTING REQUIREMENTS

A. Introduction

The trend in most states over the past few years has been to more closely monitor the construction and operation of hog buildings, manure storage structures, and land application of manure. Every state has developed some type of permitting process to protect the state's environment, particularly surface water and groundwater.

The question of whether a particular farming operation needs a permit has been generally answered in three ways. Some states base permitting requirements on the number of animals in the operation; other states base it on the type of operation, for instance, the type of manure storage; and others base it on which operations present the greatest risk to the state's environment, particularly groundwater and surface water.

A National Pollutant Discharge Elimination System (NPDES) permit is required by federal law in all states.²⁰ Livestock operations fit the point source definition if they are over 1000 animal units in size *and* discharge manure directly into the navigable waters of the state through man-made structures or discharge directly into waters flowing through or near the facilities.²¹ Operations that only discharge during storms of more than a 25 year/24 hour rainfall event are not required to obtain an NPDES permit.²² Most states administer the NPDES permitting procedure themselves, but the Environmental Protection Agency still retains the authority to examine the permits and can overturn any state decision.²³

Besides the NPDES permit, states frequently require their own construction permits, operation permits, interim permits, certificates of compliance, and operator training certification. Each of these permits serves a highly distinct purpose and as outlined below, the requirements under the various permits vary substantially from state to state.

The remainder of this section outlines the different permitting requirements in most of the major pork producing states. The major issues include which types of permits are required in each state, the sizes or types of operations requiring permits, fees and financial assurance requirements, and neighbor notification laws. In addition, other types of requirements that must be met prior to receiving the various permits. These sometimes include completing a manure management plan and a spill contingency plan, complying with set-back distances, following construction and design standards, environmental testing and record keeping, complying with renewal requirements, and disclosing ownership information.

²⁰. See Don D. Jones & Alan L. Sutton, U.S. Animal Manure Management Regulations: A Review and a Look at What's Coming 1-2 (Sept. 20-21, 1996) (presented at "Getting the Most From Your Manure Resource: Managing Your On-Farm System," Manitoba, Canada) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*).

²¹. See *id.*

²². See *id.*

²³. See *id.*

B. State-by-State Laws

1. Iowa

Iowa requires certain animal feeding operations (AFOs) to get either construction or operation permits or both from the Department of Natural Resources. All open feedlot operations with more than 1000 animal units (2500 hogs, 1000 cattle) or those with more than 300 animal units that discharge manure into a water of the state must get construction permits for any new buildings or modifications, as well as an operating permit that must be renewed every five years.²⁴

All confinement feeding operations (CFOs) with more than 200,000 pounds of hogs, the definition of a small animal feeding operation,²⁵ may have to obtain construction permits if they exceed a certain capacity. All CFOs with an aerobic system, an anaerobic lagoon, or an earthen manure storage basin must get a construction permit prior to any new construction, except for those meeting the definition above for a small operation.²⁶ CFOs using a formed manure storage structure with a hog capacity of more than 625,000 pounds must also get a construction permit.²⁷ Finally, persons with an interest in an operation who are habitual violators or who are subject to an impending enforcement action must receive a permit to build even if they do not exceed the capacity levels above.²⁸ It should be noted that no construction permits can be issued to CFOs if a person with an interest in the CFO has an enforcement action pending with the Department of Natural Resources (DNR), or if a person with a controlling interest in the CFO is classified as a habitual violator.²⁹

The actual requirements of the permit application include submitting a copy of the design plan, completing a manure management plan, submitting a list of persons that have an interest in the operation, outlining the effects on surrounding drainage, paying an indemnity fee, (ranging from \$0.02 to \$0.10 per animal unit), submitting soil boring test results, and confirming that separation distances will be met.³⁰ Finally, the county board of supervisors must be given a copy of the application and they have thirty days in which to comment on whether or not the permit should be granted.³¹ There are currently no financial assurance requirements in Iowa.

²⁴. See IOWA ADMIN. CODE r. 567-65.3 (1996).

²⁵. See *id.* r. 567-65.1.

²⁶. See *id.* r. 567-65.6(b)(1).

²⁷. See *id.* r. 567-65.6(b)(2).

²⁸. See *id.* r. 567-65.6(b)(5).

²⁹. See *id.* r. 567-65.6(3).

³⁰. See *id.* r. 567-65.8.

³¹. See *id.* r. 567-65.9.

2. North Carolina

In North Carolina, a permit is required for all animal operations that use liquid storage and have more than 250 head of swine, 100 head of cattle, or 30,000 head of birds.³² A permit is also required for any operations that are cited for water quality violations.³³ The permit, which is essentially a combined operation and construction permit, is valid for five years before it must be renewed, and the facility is subject to bi-annual inspections.³⁴ In order to receive a permit, the following major requirements must be met:

- 1) An approved manure management plan.³⁵
- 2) Written notice to all neighbors prior to any new construction.³⁶ The 1996 law requires notification of all adjoining property owners and notice to neighbors located immediately across from any roads abutting the operation.³⁷
- 3) Swine operator training.³⁸ All livestock operations required to obtain a permit must have their manure management system operated by a certified person.³⁹ The initial certification requirements are ten hours of training and an examination.⁴⁰ In addition, six hours of training is required every three years to maintain the certification,⁴¹ with certification costs of ten dollars per year.⁴²
- 4) An approved design and site that meets all state rules and regulations for things such as capacity, seepage rate, and separation distances.⁴³
- 5) The permit fees are fifty dollars for manure storage design capacities less than 100,000 pounds, one-hundred dollars for capacities between 100,000 and 800,000 pounds, and two-hundred dollars for capacities

³². See N.C. GEN. STAT. §§ 143-215.10B-C (1996).

³³. See *id.* § 143-215.1(a).

³⁴. See Telephone Interview with David McLeod, Director of Legal Affairs, North Carolina Department of Agriculture (July 22, 1997).

³⁵. See N.C. GEN. STAT. § 143-215.10C(d) (1996).

³⁶. See N.C. GEN. STAT. § 106-805 (1996).

³⁷. See *id.*

³⁸. See N.C. GEN. STAT. § 90A-47.2(a) (1996).

³⁹. See *id.*

⁴⁰. See *id.* § 90A-47.3(b).

⁴¹. See *id.*

⁴². See *id.* § 90A-47.4(b).

⁴³. See Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 20.

over 800,000 pounds.⁴⁴ North Carolina does not have any other financial assurance or bonding requirements.⁴⁵

North Carolina passed a moratorium on August 27, 1997, prohibiting all expansion and new construction of swine farms, lagoons, and animal waste management systems for swine farms. No new permits will be issued until March 1, 1999.⁴⁶ The moratorium is subject to the following exceptions: repairs or replacements of existing facilities; construction or expansion to reach the limits allowed in the original permit; construction or expansion for those who received permits prior to August 27, 1997; persons that started laying a foundation, entered into written contracts related to the construction, or have expended funds to secure financing of the new construction prior to March 1, 1997; and innovative systems that do not employ an anaerobic lagoon and have been approved by the Department of Environment, Health, and Natural Resources.⁴⁷ The above exceptions do not apply, however, to those counties located outside of certain coastal areas with populations less than 75,000 and more than \$150 million of expenditures for travel and tourism.⁴⁸

When the moratorium is over, the new law grants the Environmental Management Commission discretion to issue individual permits (rather than general permits) to certain operations if further requirements are deemed necessary to adequately protect the state's water quality, public health, or environment.⁴⁹

⁴⁴. See N.C. GEN. STAT. § 143-215.10G (1996).

⁴⁵. See Telephone Interview with David McLeod, Director of Legal Affairs, North Carolina Department of Agriculture (July 22, 1997).

⁴⁶. See Clean Water Responsibility and Environmentally Sound Policy Act, H.B. 515, § 1.1(a), 1997 N.C. Sess. Laws 458.

⁴⁷. See *id.* § 1.1(b).

⁴⁸. See *id.* § 1.2(a), (b).

⁴⁹. See *id.* § 9.2(a).

3. *Minnesota*

Minnesota requires every operation of more than fifty animal units to obtain a permit or obtain a waiver from the Pollution Control Agency (PCA) stating that a permit is not required.⁵⁰ Operations with more than ten animal units located in shoreline areas, defined as within 1000 feet of the high water mark of a lake or within 300 feet of a river or stream, may also be required to get a permit.⁵¹ Operations with less than fifty animal units or less than ten animal units located next to shorelines do not need any permits, but must still follow state laws prohibiting water pollution.⁵²

First, an NPDES operating permit is required for the larger operations with more than 1000 animal units and costs \$1230 per year.⁵³ Only twelve to fifteen of these permits have been issued, but Minnesota wants to eventually have every large operation under this type of permit.⁵⁴ The state simply does not have the resources yet to require an NPDES for more operations.⁵⁵ Currently the operations with more than 1000 animal units without an NPDES permit must obtain another type of permit.⁵⁶

A state operating permit is required for some of the operations not covered by the NPDES permit.⁵⁷ Approximately thirty state operating permits have been issued, which cost \$250 and are normally good for five years (the periods are shorter if the situation requires it).⁵⁸

An interim or construction permit is required for all new and expanded construction of manure storage structures, and for any operations that have been ordered to correct pollution or other problems.⁵⁹ This type of permit is used to monitor new construction to ensure that design specifications are met and testing is correctly completed, and is also used to monitor the progress of corrective actions taken by farms that have violated state laws.⁶⁰ The maximum duration for this type of permit is only ten months. After that the Pollution Control Agency (PCA) must

⁵⁰. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

⁵¹. See MINN. STAT. ANN. § 116.07(7)(g) (West 1997); MINN. R. 7020.0300(21) (1997).

⁵². See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

⁵³. See Telephone Interview with Dave Nelson, Feedlot Unit Supervisor, Minnesota Pollution Control Agency (July 31, 1997).

⁵⁴. See *id.*

⁵⁵. See *id.*

⁵⁶. See *id.*

⁵⁷. See *id.*

⁵⁸. See *id.*

⁵⁹. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

⁶⁰. See *id.*

decide whether to require an operating permit or no permit at all.⁶¹ There is no cost for this permit.⁶² All sizes of earthen manure storage basins normally need this permit, but farms constructing formed manure storage structures of less than 500,000 gallons sometimes do not require a permit or can easily obtain one.⁶³

Certificates of compliance, the last type of permit, are required whenever there is new construction, expansion, a change in operation, or a change in ownership.⁶⁴ It is essentially approval by the PCA that everything was constructed or modified according to state rules and regulations and is operating, or will operate, in an environmentally sound manner.⁶⁵ These permits do not have to be renewed, but changes in the operation may require a new inspection.⁶⁶ This system has been in place for several years and most farms at one time or another have received a compliance certificate that is provided to the farmer at no cost.⁶⁷

The permits in Minnesota are handled by both the state and counties. Typically local county feedlot officers (CFOs) handle most of the permitting of smaller facilities, while the CFOs often refer larger operations or the more potentially hazardous operations to the state pollution control agency.⁶⁸ The state provides some matching funds for those counties who choose to regulate themselves (including both permitting and enforcement costs).⁶⁹ Out of eighty-five counties, forty-five have their own CFOs, including most of the agriculturally intensive counties.⁷⁰

A neighbor notification bill was passed this year requiring notice to all neighbors within 5000 feet of any new or expanded construction of operations of more than 500 animal units.⁷¹ A proposed bill requiring rural homeowners and developers to notify farmers of their expansion plans was defeated.⁷²

There are no financial responsibility or bonding requirements at the state level other than the permit fees already mentioned, but counties do have authority to enact

⁶¹. *See id.*

⁶². *See* Telephone Interview with Dave Nelson, Feedlot Unit Supervisor, Minnesota Pollution Control Agency (July 31, 1997).

⁶³. *See id.*

⁶⁴. *See id.*

⁶⁵. *See id.*

⁶⁶. *See id.*

⁶⁷. *See id.*

⁶⁸. *See id.*

⁶⁹. *See id.*

⁷⁰. *See id.*

⁷¹. *See id.*

⁷². *See* Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

those requirements at the local level.⁷³ The counties can and have imposed their own permit fee requirements and they vary widely from county to county.⁷⁴

Permit applications generally require information about the owners, the size and location of the operation, a map of all water resources within 1000 feet of the proposed site, a comprehensive manure management plan, and any other information the PCA deems appropriate.⁷⁵ However, the required extent and quality of the manure management plans vary widely depending on the type of permit, and the size and characteristics of the farm.⁷⁶

⁷³. See Telephone Interview with Dave Nelson, Feedlot Unit Supervisor, Minnesota Pollution Control Agency (July 31, 1997).

⁷⁴. See *id.*

⁷⁵. See MINN. R. 7020.0500(2) (1997).

⁷⁶. See Telephone Interview with Dave Nelson, Feedlot Unit Supervisor, Minnesota Pollution Control Agency (July 31, 1997).

4. *Illinois*

Illinois recently passed the Livestock Management Facilities Act (effective May 21, 1996)⁷⁷ and adopted rules implementing the law (effective May 20, 1997)⁷⁸ that essentially codified the emergency rules adopted last fall (October 31, 1996). The law requires owners of new or modified lagoons to register with the State Department of Agriculture prior to constructing the lagoon and to follow comprehensive rules during construction and prior to operation.⁷⁹ Registering the lagoons and certifying that all applicable rules and construction standards have been met essentially works as a construction permit.⁸⁰ Each site must be inspected at least once before, during, or after construction, to ensure that the lagoon has been built properly and will operate properly, and only when it is certified that all rules have been followed is the farmer free to begin operating the lagoon.⁸¹ The registration fee is fifty dollars,⁸² and owners are required to provide adequate proof that they have the financial ability to provide for the proper closure and clean-up of lagoons.⁸³ The level of surety required has not yet been finalized, but it will be based on volumetric capacity of the lagoon, and proof of financial responsibility can be shown using insurance, a guarantee, a surety bond, a letter of credit, or a designated savings account or certificate of deposit.⁸⁴

In addition to the lagoon permit, manure management plans are also required for certain operations, and act as a type of operating permit. All farms with more than 7000 animal units must prepare and maintain a manure management plan that must be submitted to and approved by the Illinois Department of Agriculture.⁸⁵ All operations of 1000 animal units or more (but less than 7000) must prepare and maintain a manure management plan and verify they have done so to the Department of Agriculture.⁸⁶ The entire plan, however, does not need to be submitted to the state, though the Department and the EPA have a right to look at the plan at any time at the facility site.⁸⁷ Operations with less than 1000 animal units do not need to prepare a manure management plan.⁸⁸

A third type of permit is also required. All livestock waste handling facilities serving more than 300 animal units must be operated by a certified livestock manager

⁷⁷. See 510 ILL. COMP. STAT. ANN. 77/1 (West 1997).

⁷⁸. See ILL. ADMIN. CODE tit. 35, § 506 (1997).

⁷⁹. See 510 ILL. COMP. STAT. ANN. 77/15-b(b) (West 1997).

⁸⁰. See *id.*

⁸¹. See *id.*

⁸². See *id.* § 77/15-d.

⁸³. See *id.* § 77/17.

⁸⁴. See *id.*

⁸⁵. See *id.* § 77/20-d.

⁸⁶. See *id.* § 77/20-c.

⁸⁷. See *id.*

⁸⁸. See *id.* § 77/20-b.

(CLM).⁸⁹ The cost for certification or renewal is ten dollars,⁹⁰ and the certification must be renewed every three years.⁹¹ The training is currently developed and conducted by the Illinois Extension System, but any approved group can administer the training program.⁹² Since March 1997, 2200 to 2300 people have completed the program, consisting of a minimum of four hours of training and a test.⁹³ Livestock managers for operations of more than 1000 animal units must complete the training and pass the test, but livestock managers for operations between 300 and 1000 animal units are only required to attend the training sessions or pass the test.⁹⁴ The penalties for operating a facility without the supervision of a certified livestock manager start with a warning of non-compliance and an opportunity to remedy the non-compliance. If this is unsuccessful, fines will be issued and eventually the operation can be shut down.⁹⁵ “Operating under the supervision” means the certified livestock manager must be immediately available to workers operating the waste handling facility, either in person or by telecommunications, and must have the ability to be physically present at the facility within one hour.⁹⁶

Finally, all operations with more than fifty animal units that intend to build new facilities must submit a notice of intent to construct to the Department of Agriculture. The notice must include information about the size of the planned construction, names of the owners, and a description of all neighbors within the setback distances set out in state law.⁹⁷ The date the notice of intent to build is sent to the state establishes the base date for determining whether or not the operation conforms to state setback laws.⁹⁸ The notice must then be sent to all affected property owners by certified mail. If the owner begins construction within one year, the day the letter was submitted remains the established date of operation, providing protection from neighbors who oppose construction and construct a home, or move a trailer, hoping to stop construction altogether.⁹⁹

There do not appear to be any other permit fees or financial assurance requirements for hog operations, besides the lagoon registration fee, lagoon financial assurance, and the operator certification fee.

⁸⁹. See *id.* § 77/30-a.

⁹⁰. See *id.* § 77/30-f.

⁹¹. See *id.* § 77/30-c.

⁹². See Telephone Interview with Julie King, Special Counsel to the Director, Illinois Department of Agriculture (July 15, 1997).

⁹³. See Telephone Interview with Warren Goetsch, Bureau Chief of Environmental Programs, Illinois Department of Agriculture (Aug. 5, 1997).

⁹⁴. See 510 ILL. COMP. STAT. ANN. 77/30-d (West 1997).

⁹⁵. See *id.* § 77/30-g.

⁹⁶. See ILL. ADMIN. CODE tit. 35, § 506.401(a) (1997).

⁹⁷. See *id.* § 506.703. For a discussion of state setback requirements, see *infra* Part III.

⁹⁸. See *id.*

⁹⁹. See *id.*

5. *Indiana*

Indiana requires a construction permit for all new or expanded construction for confined feeding operations (CFOs) of more than 600 swine (a sow and litter count as one), more than 300 cattle, or more than 30,000 poultry.¹⁰⁰ The cost of the permit is \$100 and county officials and all neighbors whose water quality might be affected (including at least all adjoining landowners) must be notified of construction plans.¹⁰¹ Within thirty days of completion, the farmer must also submit an affidavit verifying that construction is complete and the facilities will be operated according to all permit rules.¹⁰² The main purpose of the permit is to verify that the facility will protect water quality, and nothing is required in terms of odors because the Department of Environmental Management (DEM) only deals with water quality.¹⁰³ There are no other financial assurance or bonding requirements.¹⁰⁴

In addition, the Indiana DEM requires certain operations to develop an animal waste plan that operates as an operating permit. The animal waste plan is required of all new, expanded, and older operations of more than 600 head of swine, and is also required for smaller operations that are responsible for any water quality violations.¹⁰⁵ An inspection occurs at the outset to verify that the plan will adequately deal with the manure being produced in an environmentally sound manner, and later inspections occur only upon complaints or if the Department suspects wrongdoing.¹⁰⁶ The submitted plans are considered public records,¹⁰⁷ and must be updated and re-filed with the state every five years.¹⁰⁸ The departmental regulations for the animal waste plans are currently under revision and are due to be completed by January 1, 1998.¹⁰⁹

6. *Nebraska*

Nebraska requires any operation having the potential for polluting waters of the state to ask the Nebraska Department of Environmental Quality (NDEQ) to inspect

¹⁰⁰. See IND. CODE §§ 13-11-2-39 to -40, 13-18-10-2 (1996).

¹⁰¹. See Joe Vansickle, *News Update*, NAT'L HOG FARMER, July 15, 1997, at 6; Telephone Interview with Fred Teague, Environmental Scientist, Indiana Department of Environmental Management (July 15, 1997).

¹⁰². See Joe Vansickle, *News Update*, NAT'L HOG FARMER, July 15, 1997, at 6.

¹⁰³. See Telephone Interview with Fred Teague, Environmental Scientist, Indiana Department of Environmental Management (July 15, 1997).

¹⁰⁴. See *id.*

¹⁰⁵. See *id.*

¹⁰⁶. See *id.*

¹⁰⁷. See *id.*

¹⁰⁸. See Joe Vansickle, *News Update*, NAT'L HOG FARMER, July 15, 1997, at 6.

¹⁰⁹. See Telephone Interview with Fred Teague, Environmental Scientist, Indiana Department of Environmental Management (Aug. 11, 1997).

its facilities and proposed plans and to make a determination on what permits are needed.¹¹⁰ A permit is not mandatory unless the NDEQ says it is required for a particular operation and the NDEQ has the flexibility to require any of the following permits for a particular operation or it may determine no permits are necessary.¹¹¹ Permits are available to any operation asking for one and a majority of farms have received the permits, especially in the last five years.¹¹² The NDEQ is currently swamped with new construction permit requests and certification inspection requests for operating permits.¹¹³

A construction permit is normally required for new or expanded operations.¹¹⁴ Requirements include design by a registered professional engineer, compliance with minimum design specifications, and, upon completion, a compliance certificate must be sent to the NDEQ specifying the facility was constructed according to the approved plans and the certificate must be signed by the designer and the owner or operator.¹¹⁵

Once the state receives the certification form, it is on notice that an operating permit needs to be granted.¹¹⁶ The NDEQ then tries to conduct an inspection as soon as possible (prior to operation if possible), and when this is done an operational permit will be granted if the inspection is satisfactory.¹¹⁷ The operational permit is good for the life of the operation and only needs to be renewed if major changes are made to the livestock operation.¹¹⁸

The state also issues NPDES permits to 210 facilities in Nebraska for various types of animal livestock operations, including hogs.¹¹⁹ The NPDES permit contains the highest standards of any Nebraska permit, including additional record-keeping requirements besides these previously mentioned requirements.¹²⁰

The state is also in the process of developing a fourth type of permit known as a state general permit.¹²¹ This permit would have fewer requirements than the

¹¹⁰. See NEB. ADMIN. R. & REGS. 130(2) (1995).

¹¹¹. See Telephone Interview with Walt Stoeger, Compliance Specialist, Nebraska Department of Environmental Quality (Aug. 5, 1997).

¹¹². See *id.*

¹¹³. See *id.* (Aug. 18, 1997).

¹¹⁴. See *id.* (Aug. 5, 1997).

¹¹⁵. See NEB. ADMIN. R. & REGS. 130(3) (1995).

¹¹⁶. See *id.* § 130(7).

¹¹⁷. See Telephone Interview with Walt Stoeger, Compliance Specialist, Nebraska Department of Environmental Quality (Aug. 5, 1997).

¹¹⁸. See *id.*

¹¹⁹. See *id.*

¹²⁰. See *id.*

¹²¹. See *id.*

NPDES permit, but more requirements than the construction or operation permits.¹²² If approved, it will likely be used in the more sensitive watersheds of the state.¹²³

The state does not have any financial assurance or bonding requirements, there are no neighbor notification laws,¹²⁴ and the state does not charge any fees for the above permits.¹²⁵ The state construction and operation permits may be revoked if water pollution occurs, for any misrepresentation of facts or not fully disclosing all relevant facts, for not permitting NDEQ inspectors access to the facility, or for any other violations of the rules found in title 130.¹²⁶

7. *Missouri*

Missouri requires all livestock operations with more than 1000 animal units (Class I facilities) to obtain a construction and operation permit.¹²⁷ Any operations that require an NPDES permit are included, and the NPDES requirements are in addition to the operation's construction and operation permit requirements.¹²⁸ The construction and operation permit requirements include the following:

- 1) Manure management plans are required for all permitted facilities, as well as facilities seeking a letter of approval.¹²⁹
- 2) Records must be kept for manure and soil nutrient levels, unless the operation is small enough or has sufficient land that risk of manure over-application is minimal.¹³⁰
- 3) Adequate protections must be made for all nearby groundwater and surface water sources.¹³¹
- 4) The permit costs \$3500 per year (the same as for other industrial permits in the state) for all Class IA facilities (those with more than 7000 animal units), and \$150 for five years for all other permitted operations.¹³² The operation permits are renewed every five years

¹²². *See id.*

¹²³. *See id.*

¹²⁴. *See id.*

¹²⁵. *See* NEB. ADMIN. R. & REGS. 130(5) (1995).

¹²⁶. *See id.* § 130(7).

¹²⁷. *See* Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997); MO. CODE REGS. ANN. tit. 10, § 20-6.300 (1996) (setting forth requirements for concentrated animal feeding operations).

¹²⁸. *See* Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

¹²⁹. *See id.*

¹³⁰. *See id.*

¹³¹. *See id.*

¹³². *See id.*

unless the operation requires a shorter period for some particular reason.¹³³

5) Neighbor notification is required for all neighbors within one and one-half times the separation distances set out in state law, and the state and county must be notified as well.¹³⁴ The construction application must include the number of animals, the manure handling plan, and a general layout of the site.¹³⁵ Once the application is submitted, the public has a certain amount of time to make comments to the DNR regarding issuance of a permit.¹³⁶ For expanded facilities that already have an operating permit, the process usually ends here, and the permit will be issued or denied.¹³⁷ For entirely new operations, the DNR will put out a public notice of intent to either issue or not issue the permit, and the public has one last chance to comment.¹³⁸ The problem the DNR usually faces is that public comment focuses on issues outside the DNR permitting authority, such as odor, corporate farming or size.¹³⁹

6) An indemnity fund fee of ten cents per animal unit is required for all Class IA facilities (more than 7000 animal units) utilizing flush systems,¹⁴⁰ but is refundable upon successful closing and clean-up of manure storage structures that are no longer in use.¹⁴¹

Construction or operating letters of approval, which are mostly voluntary, are also issued by the DNR for facilities of less than 1000 animal units that are following certain state environmental laws.¹⁴² The specific requirements and the procedures for receiving a letter of approval are explicitly set out in DNR regulations.¹⁴³ The DNR has the authority to require smaller operations to obtain a letter of approval or even a regular permit if they discharge wastes into waters of the state, because all operations must meet the no discharge requirement laws of the state, unless the discharge is caused by storms larger than a twenty-five year, twenty-four hour rainfall event or if the operation poses a significant threat to the environment in some

¹³³. *See id.*

¹³⁴. *See* MO. ANN. STAT. § 640.715(1) (West 1996).

¹³⁵. *See id.*

¹³⁶. *See id.*

¹³⁷. *See* Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

¹³⁸. *See id.*

¹³⁹. *See id.*

¹⁴⁰. *See* MO. ANN. STAT. § 640.745(1) (West 1996).

¹⁴¹. *See id.* § 640.747.

¹⁴². *See* MO. CODE REGS. ANN. tit. 10, § 20-6.300(5) (1996).

¹⁴³. *See id.*

other way.¹⁴⁴ The DNR exercises its discretionary authority on a case-by-case basis.¹⁴⁵ Most farms with less than 1000 animal units are not required to have any permit or letter of approval, but approximately 3000 farms have voluntarily asked for a letter of approval since the program was instituted in the 1970s.¹⁴⁶

8. *South Dakota*

In South Dakota, general permits are automatically required for all new or expanded swine feeding operations of more than 1000 animal units.¹⁴⁷ The permit requirements include approved design specifications, proper construction procedures, an approved nutrient management plan, and certain operational requirements.¹⁴⁸ Smaller operations can be required to obtain permits if countries request it (some counties require all operations with more than 300 animal units to get an approved permit), if the state has proof of water pollution violations, or if legitimate complaints have been made against an operation.¹⁴⁹

The fees for permits in 1997 are \$250 per year for operations with more than 2000 animal units, \$175 per year for operations with animal units between 1000 and 2000, and \$100 per year for operations with fewer than 1000 animal units.¹⁵⁰ The state sends out a bill each year for renewal on September 1 to each permit holder.¹⁵¹ There are no other financial assurance or bonding requirements.¹⁵²

Producers who want to receive a permit after December 12, 1997, must certify they have completed an environmental training program.¹⁵³ The South Dakota Pork Producers Council is the only group providing this training to date, but Extension is considering the possibility of offering a course as well.¹⁵⁴ Any training program must be approved by the DENR, but there is no particular mandatory statewide training program.¹⁵⁵

¹⁴⁴. See *id.* § 20-6.300(2) (1996).

¹⁴⁵. See *id.*

¹⁴⁶. See Telephone Interview with Ken Arnold, Unit Chief of Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

¹⁴⁷. See Telephone Interview with Tim Tollefsrud, Administrator, South Dakota Department of Environment and Natural Resources (July 22, 1997); Lora Duxbury-Berg, *South Dakota: Turmoil on the Prairie*, NAT'L HOG FARMER, May 15, 1997, at 28, 30.

¹⁴⁸. See Lora Duxbury-Berg, *South Dakota: Turmoil on the Prairie*, NAT'L HOG FARMER, May 15, 1997, At 30-32.

¹⁴⁹. See Telephone Interview with Tim Tollefsrud, Administrator, South Dakota Department of Environment and Natural Resources (July 22, 1997).

¹⁵⁰. See *id.*

¹⁵¹. See *id.*

¹⁵². See *id.*

¹⁵³. See *id.*

¹⁵⁴. See *id.*

¹⁵⁵. See *id.*

A second type of permit is issued to livestock operations in South Dakota. A groundwater discharge permit is required for any operation pumping more than eighteen gallons of water per minute.¹⁵⁶ South Dakota uses this requirement to regulate smaller farmers as they are required to submit an acceptable nutrient management plan prior to receiving a water permit.¹⁵⁷ Recently, two water permits for a 20,000 head and a 30,000 head cattle feedlot were approved with no opposition.¹⁵⁸ Approximately seventy general permits have been approved for hog operations of more than 1000 animal units, with the usual size being 3000 to 5000 animal units.¹⁵⁹

9. Oklahoma

The recently passed Oklahoma Concentrated Animal Feeding Operations Act of 1997 took effect September 1, 1997, and requires all concentrated animal feeding operations (CAFOs) to obtain a license from the Oklahoma Department of Agriculture authorizing operation of the facility, new construction, or expansion greater than five percent of the original capacity.¹⁶⁰ A CAFO is defined as any hog operation that discharges pollutants into waters of the state (after less than a twenty-five-year, twenty-four-hour storm) and which has a capacity of at least 2500 swine weighing more than fifty-five pounds or 10,000 weaned swine weighing less than fifty-five pounds.¹⁶¹ A CAFO is also defined as any hog operation that discharges pollutants into waters of the state through artificially constructed mechanisms or into navigable waters that pass through the property (after less than a twenty-five-year, twenty-four-hour storm) and that has a capacity of at least 750 swine weighing more than fifty-five pounds or 3000 weaned swine weighing less than fifty-five pounds.¹⁶² A CAFO may also include any operation that the Department of Agriculture determines to be a “significant contributor of pollution to waters of the state.”¹⁶³ A

¹⁵⁶. See Telephone Interview with Diane Best, Assistant Attorney General, South Dakota Attorney General’s Office (July 22, 1997).

¹⁵⁷. See *id.*

¹⁵⁸. See *id.*

¹⁵⁹. See *id.*

¹⁶⁰. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 5, 1997 Okla. Sess. Law Serv. 1964-66 (West) (codified at OKLA. STAT. ANN. tit. 2, § 9-204.1 (West 1997)).

¹⁶¹. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331 § 2(B)(11)(b), 1997 Okla. Sess. Law Serv. 1960-61 (West) (codified as amended at OKLA. STAT. ANN. tit. 2, § 9-202 (West 1997)).

¹⁶². See *id.* § 2(B)(11)(c).

¹⁶³. See *id.* § 2(B)(11)(d).

license is also required for any operations that expand, after September 1, 1997, to a capacity that meets the definition requirements of a CAFO as outlined above.¹⁶⁴

The license is essentially a construction and operation permit.¹⁶⁵ Construction designs and site plans must be approved prior to construction and the site will be inspected after construction, and only then will an “operating permit” be granted if everything was constructed properly (or is operating properly for existing facilities).¹⁶⁶ Requirements for a license include the following:

- 1) Must allow annual, unannounced state inspections.¹⁶⁷
- 2) Must file a pollution prevention plan, that includes both a manure management plan and a spill contingency plan.¹⁶⁸
- 3) Must maintain records of the environmental history of the operation, including any citations, penalties, civil actions, acts of non-compliance, and voluntary remediation efforts, for at least the past three years.¹⁶⁹
- 4) Must show evidence of financial ability to close liquid waste retention structures in the following amounts:
 - 300 to 1000 animal units = \$10,000
 - 1000 to 2000 animal units = \$25,000
 - 2000 or more animal units = \$50,000.¹⁷⁰
- 5) All licenses issued by the Department of Agriculture expire on June 30 each year and are renewed upon payment of an annual fee ranging

¹⁶⁴. See Oklahoma Feed Yards Act, H.B. No. 1522, ch. 331, § 5(E), 1997 Okla. Sess. Law Serv. 1965-66 (West) (codified at OKLA. STAT. ANN. tit. 2, § 9-204.1 (West 1997)).

¹⁶⁵. See Telephone Interview with Teena Gunter, Assistant Director of Water Quality Division, Oklahoma Department of Agriculture (Aug. 6, 1997).

¹⁶⁶. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, §§ 5(D)(2), (E), 1997 Okla. Sess. Law Serv. 1965-66 (West) (codified at OKLA. STAT. ANN. tit. 2, § 9-204.1 (West 1997)).

¹⁶⁷. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 12(A), 1997 Okla. Sess. Law Serv. 1975 (West) (codified as amended at OKLA. STAT. ANN. tit. 2, § 9-206 (West 1997)).

¹⁶⁸. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 6(B)(5), 1997 Okla. Sess. Law Serv. 1966 (West) (codified as amended at OKLA. STAT. ANN. tit. 2, § 9-205 (West 1997)); see also Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 8(F)(3), 1997 Okla. Sess. Law Serv. 1970 (West) (codified at OKLA. STAT. ANN. tit. 2, § 9-205.2 (West 1997)).

¹⁶⁹. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 6(F)(3), 1997 Okla. Sess. Law Serv. 1967 (West) (codified as amended at OKLA. STAT. ANN. tit. 2, § 9-205 (West 1997)).

¹⁷⁰. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 15(B), 1997 Okla. Sess. Law Serv. 1977 (West) (codified at OKLA. STAT. ANN. tit. 2, § 9-209.1 (West 1997)).

from \$15 for operations with less than 250 animal units to \$225 for operations with more than 10,000 animal units.¹⁷¹

6) Must provide notice to neighboring land owners, who are defined as neighbors within one mile of the proposed site or expanded site,¹⁷² and the neighbors have a right to a public hearing if they follow certain procedures.¹⁷³

C. *Analysis and Options for Iowa*

Each of the states mentioned above approach the permitting issue differently. Iowa could adopt several methods of regulation from these states that might improve the current system.

Adoption of an environmental training and certification program similar to those in North Carolina, Illinois, or South Dakota is one option. Implementation of the program could be similar to the current training program for pesticide application. The program also provide a means of keeping livestock producers up-to-date on new developments in manure management and odor control technology. The negative aspect is the cost of administering the program and the time wasted if the training is not worthwhile or if the information is available in more effective and less expensive ways.

Another option is to require operating permits for a larger number of livestock operations. Permits could be required for those who violate state laws, for the larger operations, or for all operations. The operating permits could have a renewal requirement of six months to several years based on size, and provide for annual inspections. This would also allow the state to shut down operations that are “bad actors” until they bring their operation up to acceptable standards. Iowa could give some local control in this area by adopting South Dakota’s approach and allow counties to request that operating permits be required by the DENR for certain operations. South Dakota also allows neighbors to request that a certain operation obtain an operating permit, but only if the neighbor’s complaints are justified. The negative aspects of operating permits clearly are the costs to the state associated with constant monitoring of the operations, intrusion by a government agency into historically private matters, and the compliance costs to farmers, especially if they become “paper-work” regulations.

¹⁷¹. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 14, 1997 Okla. Sess. Law Serv. 1976 (West) (codified as amended at OKLA. STAT. ANN. tit. 2, § 9-209 (West 1997)).

¹⁷². See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 2(B)(1), 1997 Okla. Sess. Law Serv. 1959 (West) (codified as amended at OKLA. STAT. ANN. tit. 2, § 9-202 (West 1997)).

¹⁷³. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 7, 1997 Okla. Sess. Law Serv. 1968-69 (West) (codified at OKLA. STAT. ANN. tit. 2, § 9-205.1 (West 1997)).

A third option is to allow or require certificates of compliance as in Minnesota or Missouri. These certificates could be granted by the DNR to all operations found to be environmentally sound. Essentially operating permits, they are only required once in Minnesota after any change in an operation, such as new expansion, modification, or change in ownership. The certificates could also be voluntary for smaller producers who want verification they are doing an adequate job environmentally or for those who want proof to give their neighbors who may have some concerns. The certificates could be annual, bi-annual, or any other frequency depending on the amount of money Iowa wants to spend on DNR staff and inspectors. If strictly voluntary, then there would be no need to require any more inspectors because the DNR personnel could work on them as time permitted.

A fourth possibility is to expand the notification requirements to include all neighbors within a certain distance, instead of only the county supervisors. However, unless neighbors have the ability to stop a project, then this idea seems unnecessary, costly, and a waste of time. If the notification requirements are expanded, it seems only fair to require all potential parties to comply. For example, rural homeowners or land developers could be required to notify farmers of any expansion plans they may have, because that will no doubt affect how the farmer conducts his operation and makes plans for the future.

Another possible area of change is in the form of financial assurance of ability to clean up manure storage facilities. There are concerns that the Iowa indemnity fund will be inadequate to deal with closing and cleaning up lagoons and other manure storage structures. There is certainly concern in the several Iowa counties that have passed or are considering passing ordinances dealing with the clean-up issue. However, excessive levels of financial assurance would severely restrict expansion of existing facilities, especially for the small to medium sized farmers, and put Iowa farmers at a competitive disadvantage with other states. Unless financial assurance requirements are carefully drafted, they could easily help the larger operations by providing a barrier to expansion for the small to mid-sized hog producer.

D. Conclusion

The issue of permitting requirements cannot be decided without taking into account the state's goals for environmental protection, the state's willingness to pay for government staff and inspectors to monitor farmers, and the ability of farmers to take care of things themselves. Any regulations should fulfill the intent of the law as precisely as possible without any unnecessary "paperwork" regulations. If the concern is with certain-sized operations (the larger farms) or types of operations (corporate farms or lagoons), then only those operations should be monitored. If people are concerned about the design and construction of certain types of facilities, then the law should focus only on making those operations environmentally sound. In conclusion, any current or future permitting requirements should be focused and

effective with no unnecessary requirements, because the extras only add to the cost for everyone.

III. WATER QUALITY LAWS

A. *Introduction*

Every state surveyed in this Note has extensive rules and regulations in place to protect the water resources of their state. Each state normally prohibits direct discharging of manure into waters of the state. Beyond that general restriction, however, the rules and regulations in place to promote clean water vary from state to state, and this section of the Note looks at some differences as they relate to hog production. The principle focus is on the following three areas: separation distances from water resources, manure management plans, and manure storage structure regulations.

Several factors must be addressed when a state implements separation distance requirements. First of all, the state must decide which water resources to designate as worthy of special protection. This may include groundwater resources such as public wells, private wells, agricultural drainage wells, and sinkholes, or surface water resources such as rivers, lakes, ponds, and reservoirs. The next issue to decide is which part of the farming operation poses a big enough threat, if any, to justify setback distance requirements from the designated water resources. The farming practices considered usually include siting of hog buildings, siting of manure storage structures (such as lagoons), and applying the manure to the land. At this point, a state would then have to consider the potential dangers or advantages of each type of building (number of animals is usually key), storage structure (earthen, concrete, or synthetic) and application practice (incorporation, injection, flood-plain or frozen ground application).

The important factors to consider when implementing manure management plans include picking the limiting agent and determining what types of records must be kept and what type of testing must be done. States typically rely on the agronomic nitrogen or phosphorous requirements of the crops grown as the limiting factor, but there are other methods such as volume limitations or other particularly important nutrients. The record keeping requirements may include the dates, rates, sites, and methods of application. Additionally, whether the records are public information and how often the plans need to be updated are important issues for consideration. Finally, testing requirements may include tests for nutrient content of the soil, manure, sludge, or groundwater.

The third major issue to address is standards for manure storage structure design and construction. Some of the major issues include locating and capping nearby drainage tiles, picking an appropriate seepage rate for the structure's liner, picking an appropriate separation distance between the bottom of the structure and top of the groundwater, and the proper design capacities. Additionally, deciding who is liable for improper designs or construction must be addressed. The persons

potentially liable could include professional engineers, building contractors, or the farmer. Finally, the state must decide rules on how often the structure must be emptied, how often it will be inspected, and what to do in case the farmer decides to quit using the storage structure (*i.e.*, proper clean-up procedures).

One remaining issue that a state may want to consider is possible tax breaks or cost share assistance for structural and management improvements made by the farmers that better protect water resources. Finally, some states are concerned with regulating the transport of manure into (or out of) their states. While a state may have some options on its own, the transport of manure is likely considered to be interstate commerce and thus it might be an appropriate issue for Congress to consider and resolve at the federal level. The next section outlines the various routes taken by states to ensure that their water resources are not adversely affected by the pork industry.

B. State-by-State Laws

1. Iowa

Iowa has separation distances for application of manure and the siting of buildings and manure storage. Manure may not be applied within 200 feet of certain “designated areas” (defined as sinkholes, cisterns, abandoned wells, unplugged agricultural drainage wells or surface inlets, drinking water wells, lakes, farm ponds, and private lakes),¹⁷⁴ unless the manure is injected or is incorporated within twenty-four hours after application, or if permanent vegetative cover exists around the designated area for at least fifty feet (and manure may not be applied on this fifty foot area).¹⁷⁵ Manure application with spray irrigation equipment must meet additional requirements, including separation distances of 100 feet between the wetted perimeter and any property boundary lines, and between 100 to 1000 feet from the nearest residence and public buildings and areas, depending on the type of manure storage from which the manure is being taken (*i.e.*, 100 feet for aerobic structures, 1000 feet for earthen basins, 750 feet for second cell lagoons).¹⁷⁶ Finally, the state has recommendations, not requirements, for nitrogen and phosphorus application rates, for application on frozen or snow-covered land, for application on land subject to flooding or adjacent to water bodies, and for steeply sloping land.¹⁷⁷

Confinement buildings and manure storage structures must be located at least 500 feet away from any sinkholes or surface intakes for agricultural drainage wells.¹⁷⁸ The separation distance is 200 feet for navigable lakes, rivers, and streams,

¹⁷⁴. See IOWA ADMIN. CODE r. 567-65.1 (1996).

¹⁷⁵. See *id.* r. 567-65.2(9).

¹⁷⁶. See *id.* r. 567-65.2(10).

¹⁷⁷. See *id.* r. 567-65.2(11).

¹⁷⁸. See IOWA CODE § 455B.204 (1997).

although not for farm ponds or private lakes.¹⁷⁹ Finally, buildings and manure storage structures must be separated from wells by 100 to 1000 feet depending on the size and type of the livestock operation and the type of well (either public or private supply, and either deep or shallow).¹⁸⁰ Any waivers of water-quality-based separation distances must be obtained from the DNR (neighbors cannot waive these requirements).¹⁸¹

Manure management plans are required for all permitted confinement facilities and those plans must show that there will be sufficient land available for manure disposal.¹⁸² The application rates may not exceed the maximum agronomic nitrogen rate for the crops being grown, either based on actual soil and manure tests or by an estimated nutrient content according to credible sources (such as Iowa State University, USDA, or a professional engineer).¹⁸³ For the typical plan, records must be kept of application (dates, rates, fields, methods, equipment) and any testing that is done, copies of any written agreements with neighbors for manure sale or disposal must be included, and all records must be open to the Department of Natural Resources (DNR) on request.¹⁸⁴ The operation must keep an updated plan on the farm at all times, along with the records proving compliance with the plan.¹⁸⁵ Unless the operator is an habitual violator, plans do not need to be submitted to the DNR when they are updated or revised. The plan only needs to be submitted at the time of application for the construction permit; therefore, the plan is not considered public information.¹⁸⁶ The DNR may inspect the plan and records at any time as long as the DNR complies with the current Iowa inspection laws by either obtaining permission from the farmer to enter the premises or by obtaining an administrative search warrant.¹⁸⁷

Any permitted operation constructing a manure storage facility in Iowa must have a registered Iowa engineer or other qualified professional certify the design plans, and if three or more animal feeding operation structures are present, the operation must also get certification that the existing drainage will not be impeded.¹⁸⁸ All drainage tiles must be removed or securely plugged in the vicinity of any newly built lagoon or earthen manure storage structure, and the operation must comply with very specific rules related to procedures, distances, and type of

¹⁷⁹. *See id.*

¹⁸⁰. *See* IOWA ADMIN. CODE r. 567-65.14(1) (1996).

¹⁸¹. *See id.* r. 567-65.14(2).

¹⁸². *See id.* r. 567-65.16.

¹⁸³. *See id.* r. 567-65.16(1).

¹⁸⁴. *See id.* r. 567-65.16(2).

¹⁸⁵. IOWA FARM BUREAU FEDERATION AND IOWA PORK PRODUCERS ASS'N, IOWA LIVESTOCK ENVIRONMENTAL REGULATIONS 21 (1997).

¹⁸⁶. *See id.*

¹⁸⁷. *See id.*

¹⁸⁸. *See* IOWA ADMIN. CODE r. 567-65.8(1)(f), (i) (1996).

structure, unless DNR waives the requirement.¹⁸⁹ The state recommends four feet of separation between the bottom of an earthen manure storage facility and the groundwater table. If the distance is less than two feet, a synthetic liner must be used.¹⁹⁰ Lagoons and earthen basins must be sealed in a manner that allows no more than “1/16 inch per day seepage loss at a water depth of six feet,” and the seepage rate must be tested and the results sent to the DNR prior to operating the storage structure.¹⁹¹ Permitted facilities are generally required to empty earthen storage basins at least once or twice per year, depending on the type of structure.¹⁹² Finally, all operations receiving construction permits must submit a certification to the DNR from a registered professional engineer stating that the structure was constructed in accordance with the design plans, construction was supervised during critical points, the facility was inspected after completion and prior to operation, and any nearby drainage tile was properly removed or capped.¹⁹³

Finally, once an animal feeding operation is discontinued, all the manure from its manure storage facilities must be removed and land applied within six months of closing down the operation.¹⁹⁴

2. *North Carolina*

North Carolina has state separation distances for water quality purposes. Swine buildings and lagoons must be located at least 500 feet from both private and public water supply wells and construction is completely prohibited on land within a 100-year flood plain.¹⁹⁵ Swine manure from lagoons must be applied at least seventy-five feet away from rivers, streams, and the boundary of any property with an occupied residence.¹⁹⁶

Manure management plans are required for all permitted facilities, that is, every hog farm with more than 250 head of swine.¹⁹⁷ The plan is considered public information and a copy is kept in the Department of Health and Natural Resources.¹⁹⁸ The plan must include the following:

¹⁸⁹. *See id.* r. 567-65.15.

¹⁹⁰. *See id.* r. 567-65.15(7).

¹⁹¹. *Id.* r. 567-65.15(11).

¹⁹². *See id.* r. 567-65.15(4), (5).

¹⁹³. *See id.* r. 567-65.17.

¹⁹⁴. *See id.* r. 567-65.2(8).

¹⁹⁵. *See* Swine Farm Siting Act, H.B. No. 515, § 4.1, 1997 N.C. Sess. Laws 458 (codified at N.C. GEN. STAT. § 106-803 (1997)).

¹⁹⁶. *See id.*

¹⁹⁷. *See* N.C. GEN. STAT. § 143-215.10B-.10C (1996).

¹⁹⁸. *See* Telephone Interview with David McLeod, Director of Legal Affairs, North Carolina Department of Agriculture (July 22, 1997).

- 1) A checklist of all odor sources with plans to minimize the downwind effects through best management practices (BMPs);
- 2) A checklist of all potential insect sources and BMPs to minimize any problems;
- 3) Provisions for disposing of dead animals;
- 4) Provisions for BMPs relating to riparian buffers or other equivalent protections along perennial streams;
- 5) Provisions for emergencies, such as emergency spillways and emergency management plans, in order to minimize risks of environmental damage;
- 6) Provisions regarding proper balance between nitrogen crop needs and nitrogen application rates, as well as proper balance of pH levels using lime;
- 7) Records from testing and application data must be kept;
- 8) Provisions for periodic testing of manure as close to application time as possible (at least within sixty days) and at least annual soil testing of soil nutrient levels.¹⁹⁹

Nitrogen is the limiting agent, but zinc and copper must also be monitored and if they reach excess levels another site must be used.²⁰⁰ Manure must be applied within thirty days of when crops can use the nutrients.²⁰¹ Because most operations apply manure to Bermuda grass, which has a high nitrogen use and grows year-round in North Carolina's climate, the requirement is not the major burden it would be in northern states.²⁰²

North Carolina has several regulations dealing with manure storage structures. Manure storage structures must have at least a 180-day capacity, must use a type of liner material that meets a seepage rate of no more than 1/28 inch per day, and there must be enough land to apply the manure at agronomic rates.²⁰³ Both the design and site need approval prior to building.²⁰⁴ There are no minimum distance standards from the bottom of manure storage structures to the groundwater level.²⁰⁵ Any lagoon that is closed must have the sludge and waste water removed; the site must be

¹⁹⁹. See N.C. GEN. STAT. § 143-215.10C(e)(1)-(8) (1996).

²⁰⁰. See *id.* § 143-215.10C(e)(6).

²⁰¹. See Don D. Jones & Alan L. Sutton, U.S. Animal Manure Management Regulations: A Review and a Look at What's Coming 16 (Sept. 20-21, 1996) (presented at "Getting the Most from your Manure Resource: Managing Your On-Farm System," Manitoba, Canada) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*).

²⁰². See Telephone Interview with Carroll Pierce, Assistant Director for Technical Services, Division of Soil and Water Conservation, North Carolina Department of Environment and Natural Resources (July 22, 1997).

²⁰³. See Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 20.

²⁰⁴. See *id.*

²⁰⁵. See *id.*

turned into a farm pond or back-filled and graded; and the NRCS must oversee the process.²⁰⁶

North Carolina also has a cost share assistance program for water quality improvements. The state pays 75% of a farmer's cost, up to \$75,000 per year, for implementing approved water quality best management practices (BMPs).²⁰⁷

A water quality study was recently done on thirty previously contaminated wells in one of North Carolina's most intensive hog regions.²⁰⁸ The results of the test showed that the groundwater nitrate pollution was caused more by other sources (synthetic fertilizers, septic systems, and naturally occurring soil organic nitrogen) than from hog manure.²⁰⁹ The 1997 legislature added three new water quality regulatory programs for the state that will affect hog farms. First, the Environmental Management Commission (EMC) was directed to adopt annual discharge limits for both nitrogen and phosphorus for permitted farms located near nutrient sensitive waters.²¹⁰ Second, a new requirement orders the EMC to develop model storm water management programs to be used by state agencies or local government units responsible for storm water runoff.²¹¹ Finally, and perhaps most importantly, the EMC was ordered to develop and implement basin-wide water quality management plans for each of the seventeen major river basins in the state.²¹² The Neuse River plan is already being implemented and the EMC is supposed to make plans for the other river basins, taking into account all point and non-point sources of pollutants from municipal waste water facilities, industrial waste water systems, septic tank systems, storm water management systems, golf courses, farms using fertilizers and pesticides, lawns and gardens, and animal operations.²¹³ The plans, once developed and implemented, must be reviewed and revised every five years and all entities responsible for any point or non-point pollution must share the responsibility of reducing future pollutants.²¹⁴

²⁰⁶. See Don D. Jones & Alan L. Sutton, U.S. Animal Manure Management Regulations: A Review and a Look at What's Coming 19 (Sept. 20-21, 1996) (presented at "Getting the Most From Your Manure Resource: Managing Your On-Farm System," Manitoba, Canada) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*).

²⁰⁷. See N.C. GEN. STAT. § 143-215.74(b)(6) (1996).

²⁰⁸. See Karen McMahan, *Fighting Back*, NAT'L HOG FARMER, May 15, 1997, at 22.

²⁰⁹. See *id.*

²¹⁰. See Clean Water Responsibility and Environmentally Sound Policy Act, H.B. No. 515, § 6.1, 1997 N.C. Sess. Laws 458 (amending N.C. GEN. STAT. § 143-215.1 (1997)).

²¹¹. See *id.* § 7.1 (amending N.C. GEN. STAT. §143-214.7 (1997)).

²¹². See *id.* § 8.2 (codified at N.C. GEN. STAT. §143-215.8B (1997)).

²¹³. See *id.*

²¹⁴. See *id.*

3. *Minnesota*

In Minnesota, separation distances are primarily handled by the counties through local zoning laws and the separation distances vary widely from county to county.²¹⁵ The state does have some influence over separation distances during the permitting process. Any facilities or storage units that are built too close to public waters or that pose significant risks to the waters of the state will be forced to relocate.²¹⁶ The PCA has significant discretion in this area; therefore, no blanket state rules set out separation distances for water quality (although the state does have recommendations that many counties probably follow to some extent).²¹⁷ The state regulations suggest that the farmer can build wherever he prefers, as long as he can prove that water quality in the area will not be adversely affected.²¹⁸

The state does require manure management plans for every operation that needs any type of permit.²¹⁹ However, the extent and quality of a particular plan varies according to the size of the operation.²²⁰ Small farms with sufficient available land for manure application generally only have to prove that the land can handle all of the manure and that they will apply manure at agronomic rates.²²¹ Larger farms, on the other hand, must ordinarily keep records available for inspection for three years.²²² The state PCA has wide latitude in determining what is required and accepted in the plans.²²³ In most cases, the agronomic nitrogen rate is the limiting factor, but in some parts of the state phosphorus is limiting.²²⁴ Finally, the manure management plans are considered public records.²²⁵

Minnesota's standards for the design and construction of manure storage structures are imposed on hog operations through the interim permits and construction permits. The liner materials must be earth, concrete, or plastic, and must meet a seepage rate of 1/56 inch per day.²²⁶ The distance from the bottom of the structure to the groundwater level must be two feet above the seasonal saturation

²¹⁵. See Telephone Interview with Dave Nelson, Feedlot Unit Supervisor, Minnesota Pollution Control Agency (July 31, 1997).

²¹⁶. See *id.*

²¹⁷. See *id.*

²¹⁸. See *id.*

²¹⁹. See *id.*

²²⁰. See *id.*

²²¹. See *id.*

²²². See *id.*

²²³. See *id.*

²²⁴. See *id.*

²²⁵. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

²²⁶. See Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 20.

level.²²⁷ There is no standard design capacity unless government cost share funds are used and then storage capacity must be at least nine months.²²⁸ The designs are usually approved before construction by a professional engineer or NRCS person (all manure storage structures with capacities of more than 500,000 gallons must be approved by a registered professional engineer or soil conservation employee),²²⁹ and the site usually must be inspected after construction as well.²³⁰ The larger permitted facilities with operating permits are subject to more frequent maintenance inspections, but the smaller operations generally do not have any maintenance inspections.²³¹

4. *Illinois*

The state of Illinois does not have any mandatory minimum separation distances between buildings, manure storage structures and water resources, except those outlined below for lagoons. For lagoons the separation requirements are site specific and based on the size and type of lagoon and surrounding land and water characteristics.²³² Application restrictions prohibit manure applications within 150 feet of potable wells and within 200 feet of surface waters unless there is adequate protection (such as dikes), and no application can take place in ten-year flood plains unless it is injected or incorporated into the soil.²³³

Manure management plans are required for certain-sized operations. All operations with more than 7000 animal units must develop an approved plan. The plan is then kept on file in the state Department of Agriculture and is open to the public.²³⁴ The plan must be reviewed annually, updated, if necessary, and a revised plan must be submitted within sixty days to the state whenever there is a significant change in the amount of manure annually applied, the number of acres available for disposal, cropping sequences, or the methods used for application.²³⁵ Manure testing for nutrient content is required annually,²³⁶ and the sludge must be tested for

²²⁷. *See id.*

²²⁸. *See* Don D. Jones & Alan L. Sutton, U.S. Animal Manure Management Regulations: A Review and a Look at What's Coming 16 (Sept. 20-21, 1996) (presented at "Getting the Most from your Manure Resource: Managing Your On-Farm System," Manitoba, Canada) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*).

²²⁹. *See* MINN. R. 7020.0500(2)(c) (1997).

²³⁰. *See* Telephone Interview with Dave Nelson, Feedlot Unit Supervisor, Minnesota Pollution Control Agency (July 31, 1997).

²³¹. *See id.*

²³². *See* Telephone Interview with Julie King, Special Counsel to the Director, Illinois Department of Agriculture (July 15, 1997).

²³³. *See* 510 ILL. COMP. STAT. ANN. 77/20-f (West 1997).

²³⁴. *See id.* § 77/20-d.

²³⁵. *See* ILL. ADMIN. CODE tit. 35, § 506.313 (1997).

²³⁶. *See id.* § 506.305.

nutrient content before any of it can be applied to land.²³⁷ Application records must be kept for at least three years and the application rates must not exceed the agronomic nitrogen requirements of the crops grown when averaged over a five-year period.²³⁸ All operations with 1000 to 7000 animal units must also develop their own manure management plan with similar requirements, but the plan does not need to be turned into the state either initially or when revised.²³⁹ As a result, the plan is considered a private, rather than public record, but is subject to state inspection at any time.²⁴⁰ Finally, all operations with less than 1000 animal units do not need any type of manure management plan.²⁴¹

New lagoons have additional requirements, other than those in the permit process, including specifications for size, slope, freeboard, and other design standards.²⁴² In addition, groundwater monitoring and liners may be required for certain lagoons depending on how close they are constructed to groundwater resources, there must be no tile lines within fifty feet of the lagoons when constructed, and there must be at least 100 feet between the lagoon and any type of well or other conduit to groundwater.²⁴³ When lagoons are no longer in use, the farmer must completely empty all waste, sludge, and at least six inches of dirt within two years, all of which must be tested for nutrient content and then applied at agronomic rates.²⁴⁴ The Department of Agriculture has authority to grant waivers to these requirements, including extending the time to empty the lagoon (if monitoring continues) or allowing alternative clean-up plans if the plans can be environmentally justified (such as turning the site into a farm pond).²⁴⁵

The state has also ordered the Department of Agriculture and Department of Revenue to recommend tax breaks for equipment purchased by farmers that is used to protect water resources.²⁴⁶

²³⁷. *See id.* § 506.312.

²³⁸. *See* 510 ILL. COMP. STAT. ANN. 77/20 (e)-(f) (West 1997).

²³⁹. *See id.* § 77/20-c.

²⁴⁰. *See id.*

²⁴¹. *See id.* § 77/20-b.

²⁴². *See* ILL. ADMIN. CODE tit. 35, § 506.204 (1997).

²⁴³. *See id.*

²⁴⁴. *See id.* § 506.209.

²⁴⁵. *See* 510 ILL. COMP. STAT. ANN. 77/15-e (West 1997).

²⁴⁶. *See id.* § 77/45.

5. *Indiana*

Indiana has state setback laws for distances between waste storage structures and water bodies (and other water sources), but only offers recommendations of setbacks for manure application. The required separation distances include the following:

- 1) 50 feet from roads,
- 2) 100 feet from water wells,
- 3) 100 feet from any streams, drainage ditches, or other bodies of water for concrete or metal storage structures, and
- 4) 300 feet from any streams, drainage ditches, or other bodies of water for earthen storage/treatment facilities.²⁴⁷

The recommendations for manure application include no application closer than 200 feet from a well, and no application within fifty feet of a road or within 100 feet of a surface tile inlet or other body of water unless the manure is injected or immediately incorporated.²⁴⁸

Manure management plans, known as animal waste plans in Indiana, are required for all older confined feeding operations by the year 2000, and earlier than 2000 for any new or expanding confined feeding operations that need a construction permit.²⁴⁹ A “confined feeding operation” is defined as any confined feeding of more than 600 swine (or 300 cattle, 600 sheep, 30,000 fowl), any animal feeding operation violating the state water pollution laws or regulations, or any other farming operation that voluntarily elects to be subject to the rules.²⁵⁰ All manure storage facilities located on contiguous property are considered components of one confined feeding operation for determining the 600 head threshold.²⁵¹ Several water quality issues are addressed in the construction permit requirements and the following information must be provided:

- 1) “The boundaries of the confined feeding operation and the manure application ground.
- 2) The general topography of the area.

²⁴⁷. JOHN D. COPELAND, NATIONAL CTR. FOR AGRIC. LAW RESEARCH AND INFO., ENVIRONMENTAL LAWS IMPACTING INDIANA LIVESTOCK PRODUCERS (1994).

²⁴⁸. *See id.*

²⁴⁹. *See* Telephone Interview with Fred Teague, Environmental Specialist, Indiana Department of Environmental Management (Aug. 11, 1997).

²⁵⁰. *See* IND. CODE § 13-11-2-40 (1996).

²⁵¹. *See* INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, MANURE MANAGEMENT—AW-1 PLAN REQUIREMENTS 1 (undated).

- 3) The location and names of streams, drainage ditches, lakes and roads.²⁵²
- 4) Water well locations, drainage patterns, and field tiles.²⁵³

The manure management plan itself requires the following information from farmers:

- 1) “Type, amount, and treatment of manure,
- 2) Methods of storage and application equipment used,”²⁵⁴
- 3) Soil analysis testing procedures, and
- 4) Application records (dates and rates) together with any required soil and manure tests.²⁵⁵

These records do not need to be sent to the Department of Environmental Management (DEM), but they must be available on the farm for inspection by the DEM.²⁵⁶ The original animal waste plan must be sent to the DEM and, therefore, it is a public record.²⁵⁷ Finally, the original must be updated and re-filed with the state every five years.²⁵⁸

Indiana’s manure storage structures are also regulated, principally during the design and construction phases. Earthen manure storage facilities must have at least an eight foot top width and a 2.5 to 1 inside slope.²⁵⁹ There must be at least two feet of freeboard in all types of uncovered facilities, whether earthen or concrete, and no overflow pipes or emergency spillways are permitted.²⁶⁰ A professional engineer, or other acceptable person, must approve all earthen manure storage structure designs.²⁶¹ Also, storage facilities must have at least 120 days of storage.²⁶² Finally, the state does not have any regulations regarding lagoon closure, but the

²⁵². *Id.* at 2.

²⁵³. *See id.* at 3.

²⁵⁴. *Id.* at 3.

²⁵⁵. *See id.*

²⁵⁶. *See* Telephone Interview with Fred Teague, Environmental Specialist, Indiana Department of Environmental Management (Aug. 11, 1997).

²⁵⁷. *See id.* (July 15, 1997).

²⁵⁸. *See* Joe Vansickle, *News Update*, NAT’L HOG FARMER, July 15, 1997, at 6.

²⁵⁹. *See* INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, MANURE MANAGEMENT—AW-1 PLAN REQUIREMENTS 1 (undated).

²⁶⁰. *See id.*

²⁶¹. Don D. Jones & Alan L. Sutton, U.S. Animal Manure Management Regulations: A Review And A Look At What’s Coming 11-20 (Sept. 20-21, 1996) (presented at “Getting the Most from your Manure Resource: Managing your On-Farm System,” Manitoba, Canada) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*).

²⁶². *See id.*

DEM has developed its own policy on how to handle closing the lagoons in an environmentally responsible manner.²⁶³

6. *Nebraska*

Nebraska has state separation distance requirements for protecting water quality even though counties have local zoning control. Livestock waste control facilities must be located at least 100 feet from all wells used for domestic purposes and in certain designated protected groundwater areas they must be located at least 1000 feet away from public drinking water supply wells.²⁶⁴

The state is also divided into twenty-three different natural resource districts (NRDs) that have authority to regulate non-point source agricultural pollutants within the district.²⁶⁵ The NRDs in the past have exercised their authority to regulate nitrate contamination by mandating implementation of certain best management practices (BMPs) by farmers within that district.²⁶⁶ The procedure includes a method for public input, a requirement that all regulations be science based (for instance, a legitimate groundwater protection concern and rules that are effective and focused on addressing that concern), and state approval of any regulations.²⁶⁷ Even though the NRDs probably cannot regulate manure storage (point sources) under their authority, manure application is considered non-point source pollution and, therefore, manure application BMPs can probably be required.²⁶⁸ Only one district has drawn up specific plans to regulate manure application and whether the plans were approved by the state is unknown.²⁶⁹

Manure management plans are required for all permitted operations.²⁷⁰ Agronomic nitrogen is the limiting agent, and any changes made to the plan must be submitted to the NDEQ.²⁷¹ Record keeping is not required, nor is testing generally required unless the operation has large amounts of manure and very little land.²⁷²

²⁶³. See Telephone Interview with Fred Teague, Environmental Specialist, Indiana Department of Environmental Management (July 15, 1997).

²⁶⁴. See NEB. ADMIN. R. & REGS. 130(10) (1995).

²⁶⁵. See J. DAVID AIKEN ET AL., A FARMER'S HANDBOOK ON LIVESTOCK REGULATION IN NEBRASKA 7 (1994).

²⁶⁶. See *id.*

²⁶⁷. See Telephone Interview with Mike Linder, Legal Counsel, Nebraska Department of Environmental Quality (July 21, 1997).

²⁶⁸. See *id.*

²⁶⁹. See J. DAVID AIKEN ET AL., A FARMER'S HANDBOOK ON LIVESTOCK REGULATION IN NEBRASKA 7 (1994).

²⁷⁰. See Telephone Interview with Walt Stoeger, Compliance Specialist, Nebraska Department of Environmental Quality (Aug. 5, 1997).

²⁷¹. See *id.*

²⁷². See *id.*

Anything submitted to the NDEQ is considered a public record, unless an operation can show that the plan is a trade secret.²⁷³

Manure storage structures must have a minimum of 180 days of storage and liner materials must meet a seepage rate of less than 1/4 inch per day.²⁷⁴ Most other requirements are at the discretion of the NDEQ to ensure that plans are reasonable and adequately protect surrounding water resources.²⁷⁵ Irrigation systems used to apply manure must meet special requirements, such as the type of equipment and safety devices used, and annual inspections are also required.²⁷⁶

7. Missouri

In terms of separation distances, Missouri has prohibited construction of any Class IA facilities (more than 7000 animal units) in certain designated “critical watersheds.”²⁷⁷ To date, watersheds around three rivers have been designated as critical.²⁷⁸ All types of facilities (not just Class IA) must be located at least 300 feet away from water wells, ponds, and sinkholes.²⁷⁹ Land application also requires a 300 feet separation distance from wells, ponds, and sinkholes.²⁸⁰

Manure management plans are required for all facilities that need a permit or that receive a letter of approval.²⁸¹ In general, the plan must show that all nearby water sources will be adequately protected, records of application must be maintained and manure and soil tests must be performed (if the operation is small enough testing is unnecessary).²⁸² The agronomic rate for the crop planted is the limiting factor.²⁸³

²⁷³. See Telephone Interview with Lisa Buechler, Attorney, Nebraska Department of Environmental Quality (Aug. 15, 1997).

²⁷⁴. See Joe Vansickle, *States Go to War Over the Environment*, NAT’L HOG FARMER, May 15, 1997, at 20 tbl.1.

²⁷⁵. See Telephone Interview with Walt Stoeger, Compliance Specialist, Nebraska Department of Environmental Quality (Aug. 5, 1997).

²⁷⁶. See NEB. ADMIN. R. & REGS. 130(11) (1995).

²⁷⁷. See MO. CODE REGS. ANN. tit. 10, § 20-6.300(2)(c)(1) (1996).

²⁷⁸. See *id.*

²⁷⁹. See Don D. Jones and Alan L. Sutton, U.S. Animal Manure Management Regulations: A Review and a Look at What’s Coming 16 (Sept. 20-21, 1996) (presented at “Getting the Most from your Manure Resource: Managing your On-Farm System,” Manitoba, Canada) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*).

²⁸⁰. See *id.*

²⁸¹. See Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

²⁸². See *id.*

²⁸³. See Don D. Jones and Alan L. Sutton, U.S. Animal Manure Management Regulations: A Review and a Look at What’s Coming 16 (Sept. 20-21, 1996) (presented at “Getting the Most from your Manure Resource: Managing your On-Farm System,” Manitoba, Canada) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*).

Missouri does have design standards for manure storage structures and the designs must be approved by a professional engineer or other qualified person.²⁸⁴ In general, lagoons must have at least one year of storage, but the required capacities of other types of manure storage is site specific (depending upon climate, weather, crops) and is determined by the DNR.²⁸⁵ Other types of structures do not need as much storage (normally only 180 days).²⁸⁶ The distance between the bottom of storage structures and the groundwater level must be at least four feet and the allowable seepage rate is no more than 1/56 inch per day.²⁸⁷ All Class IA operations located in drinking water intake structure areas (one type of critical watershed) must submit a spill prevention plan for department approval.²⁸⁸

An interesting issue recently in the news concerns the transportation of manure from Missouri into Iowa.²⁸⁹ Missouri does not have the authority to regulate the application of manure within Iowa's borders, but they can regulate Iowa farmers who try to apply manure in Missouri if the Iowa operation has more than 1000 animal units.²⁹⁰ The potential problem under current Iowa law is that it appears Iowa cannot regulate the application of manure in Iowa by Missouri farmers.²⁹¹

Missouri's lagoon closure regulations also apply to manure storage structures other than lagoons.²⁹² When a manure storage structure ceases to be operated, the following rules apply:

- 1) Class I operations must continue to maintain a valid operating permit until all storage structures are properly closed according to a plan developed by the DNR.²⁹³ The plan's requirements include land application of all manure and sludge at agronomic rates with no discharge to surrounding waters, and converting the site to a farm pond or filling it with dirt and planting adequate vegetative cover.²⁹⁴

²⁸⁴. See MO. CODE REGS. ANN. tit. 10, § 20-6.300(3)(B) (1996).

²⁸⁵. See Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

²⁸⁶. See *id.*

²⁸⁷. See Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 20.

²⁸⁸. See MO. CODE REGS. ANN. tit. 10, § 20-6.300(2)(c)(2) (1996).

²⁸⁹. See Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

²⁹⁰. See Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

²⁹¹. See Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

²⁹². See MO. CODE REGS. ANN. tit. 10, § 20-6.300(4) (1996).

²⁹³. See *id.* § 20-6.300(4)(A).

²⁹⁴. See *id.* § 20-6.300(4)(B).

Once the site is properly cleaned up, the operation is entitled to a return of its indemnity fee.²⁹⁵

2) Other operations need to either maintain the structure as is without any discharge into state waters or they must close the facility according to a DNR approved plan.²⁹⁶

8. *South Dakota*

There are no blanket separation distance rules at the statewide level in South Dakota, but counties have the authority to impose their own separation distances.²⁹⁷ However, the state does require site-specific separation distances for water quality (adequate protection is the test) as part of the permitting process.²⁹⁸

Manure management plans are required for most operations either through the general permitting requirements (as part of the construction permit) for larger producers²⁹⁹ or through groundwater discharge permits (if more than eighteen gallons of water are pumped per minute) for smaller producers.³⁰⁰ The plans generally require records of application be maintained and available for inspection, including dates, times, rates, annual soil tests, and annual manure tests.³⁰¹

Manure storage structures are inspected during or after construction, and certain minimum design standards must be followed.³⁰²

9. *Oklahoma*

Oklahoma's water quality separation distances include three mile setbacks from state parks and resorts, three miles from the high water mark of a public water supply basin, and 300 feet from public and private drinking water wells.³⁰³

Hog operations requiring a pollution prevention plan must develop an animal waste management plan,³⁰⁴ spill contingency plan for potential pollutants, perform annual soil tests, keep very extensive application and other records for three years,

²⁹⁵. See MO. ANN. STAT. § 640.747 (West 1997).

²⁹⁶. See MO. CODE REGS. ANN. tit. 10, § 20-6.300(4)(A)(2) (1996).

²⁹⁷. See Telephone Interview with Tim Tollefsrud, Administrator, South Dakota Department of Environment and Natural Resources (July 22, 1997).

²⁹⁸. See *id.*

²⁹⁹. See *id.*

³⁰⁰. See Telephone Interview with Diane Best, Assistant Attorney General, South Dakota Attorney General's Office (July 22, 1997).

³⁰¹. See Telephone Interview with Tim Tollefsrud, Administrator, South Dakota Department of Environment and Natural Resources (July 22, 1997).

³⁰². See *id.*

³⁰³. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. 1522, § 17(H)-(I), 1997 Okla. Sess. Law Serv. 1980. (to be codified at OKLA. STAT. tit. 2, § 9-210.1 (1997)).

³⁰⁴. See *id.* § 9(C) (to be codified at OKLA. STAT. tit. 2, § 9-205.3 (1997)).

provide a description of all management controls for the facility, provide a description of the design standards for any manure storage facilities, and specify any training requirements for employees.³⁰⁵ The limiting agent in Oklahoma is both the agronomic nitrogen rate *and* phosphorus rate, and soils where manure is applied must be analyzed annually for nitrogen and phosphorus content and the results must be submitted to the Department of Agriculture.³⁰⁶ There are additional best management practices requirements that licensed facilities must meet, and many of those practices will soon be clarified through the rule-making process.³⁰⁷ Any irrigation systems used to dispose of manure must have at least one of two specific types of safety equipment systems in place to avoid manure backflow into ground or surface waters.³⁰⁸

Manure storage structures are regulated during construction, and compliance with various design standards is required, including a requirement that there be at least four feet between the bottom of the storage facility and the highest seasonal groundwater level.³⁰⁹ If a liner is installed, it must be inspected every five years by a professional engineer to ensure its integrity.³¹⁰

C. Analysis and Options for Iowa

Iowa's separation distance laws appear to be as good as, or better than, the laws of other states in protecting the state's water supplies. The one potential improvement in the state's laws is implementation of watershed-wide rules regarding pollution, much like North Carolina and, to a certain extent, Nebraska. These rules could provide extra protection for certain "critical" water resources and could target pollution sources other than just hog farms, such as industry, private septic systems, and golf courses.

Iowa could make improvements to its manure management plans. The state may want to require that operations develop a spill prevention plan, including what to do in case of a spill, who to call, and how to minimize the damage. The plan may include obtaining or knowing where to get the equipment necessary to stop leaks or establishing plans to deal with possible flooding or other unusual natural acts.

Another improvement to manure management plans would be increased monitoring and regular updating of those plans. It seems unnecessary for a farmer to keep detailed records of application, testing, and other requirements if the records are never checked. It also seems unnecessary to mandate significant record-keeping or

³⁰⁵. See *id.* § 8(F) (to be codified at OKLA. STAT. tit. 2, § 9-205.2 (1997)).

³⁰⁶. See *id.* § 9(D) (to be codified at OKLA. STAT. tit. 2, § 9-205.3 (1997)).

³⁰⁷. See *id.* § 9(A), (B) (to be codified at OKLA. STAT. tit. 2, § 9-205.3 (1997)).

³⁰⁸. See *id.* § 11(A)(1) (to be codified at OKLA. STAT. tit. 2, § 9-205.5 (1997)).

³⁰⁹. See *id.* § 10(C) (to be codified at OKLA. STAT. tit. 2, § 9-205.4 (1997)); see also Oklahoma Concentrated Animal Feeding Operations Act, H.B. 1522, § 8(F)(9), 1997 Okla. Sess. Law Serv. 1970. (to be codified at OKLA. STAT. tit. 2, § 9-205.2 (1997)).

³¹⁰. See *id.* § 10(I)(2) (to be codified at OKLA. STAT. tit. 2, § 9-205.4 (1997)).

testing requirements for farmers who have sufficient land available relative to the amount of manure they have to apply. In this regard, the plans should be site-specific as much as possible, and farmers who do not need detailed plans should not be forced to meet the same requirements that farmers with lots of manure and little land need to meet. The state may have an interest in monitoring the contracts that allow for the application of manure of a neighbor's land. This is because there are important liability and manure content issues to be worked out. Furthermore it is usually better to do this before problems arise. The state could mandate liability, or it could set up a statutory presumption of liability on one of the parties, to make enforcement in the courts easier.

The manure storage structure regulations also seem to be adequate, especially in the area of design specifications and as-built structure certification. The state could improve its lagoon closure rules by extensively specifying how to properly shut down a storage facility. For example, the law says nothing about testing sludge nutrient content, about what to do with the site (*e.g.*, fill it with dirt or turn it into a farm pond), or what type of monitoring the state will conduct. The state also must decide if each closure should be treated the same or on a site-specific basis, with a different clean-up plan developed to fit the needs of each operation.

D. Conclusion

Iowa has some of the best natural resources in the world, especially its productive farmland. Water quality in the state should be one of the highest priorities in any debate over pork production. The good news is that Iowa's water quality laws seem to be providing sufficient protection. However, this does not mean the state should fail to re-evaluate annually its water laws to ensure that everything within reason and cost is done to protect our resources. The public must accept that at some point a few accidents may occur when the state markets twenty-two million hogs per year, just as there are bound to be car accidents and plane crashes from time to time. However, the public should also expect the state and farmers to do what they can to minimize the number of accidents and to minimize the damage if and when an accident does occur. Some of the revisions mentioned above, as implemented in other states, may improve protection of our water resources and those changes should be implemented as soon as possible if the benefits outweigh the costs. The state may have a role in reducing the costs of compliance through cost share assistance programs, similar to the money appropriated last year to help close certain agricultural drainage wells, because all citizens of the state benefit from high quality water resources, and a strong agricultural economy and pork industry.

IV. ODOR REGULATIONS AND NUISANCE LAWS

A. Introduction

Nuisance law and its relationship to livestock production is a volatile and important issue for the future of Iowa pork production. Nuisance law is very important for two reasons. First, it is a crucial factor in how disputes between neighbors are resolved. Second, it may be an extremely important factor in a farmer's plans for expanding or modernizing his facilities. Every state has some type of nuisance-suit protection for farmers. These may include a first-in-time rule or a limited period of time after which nuisance suits are barred. Every state also includes certain exceptions within its general protections, such as water pollution, negligent operation, expansion, or for failing to follow applicable state and local laws. Another important consideration is determining the appropriate presumption, usually that a farm is not a nuisance, and the legal standard that must be met by complaining neighbors in order to overcome the presumption. Lastly, a state may want to consider other modes for dispute resolution, such as mediation, or a loser-pays provision for frivolous nuisances suits.

In addition to nuisance law protections and exceptions enacted by Iowa and other states, other mechanisms have been employed by governments to deal with the issue of odor. Mechanisms include separation distances for buildings, storage structures, and manure application, direct odor regulations, cost share assistance for odor minimization methods, and requiring farmers to develop plans for minimizing the odor on their farm. The next section of the Note outlines efforts by Iowa and other major pork producing states to deal with the issue of odor.

B. State-by-State Laws

1. Iowa

Iowa has three laws providing nuisance protection for livestock producers. The first is known as the feedlot nuisance law.³¹¹ The law provides an absolute defense to nuisance actions if two conditions are met.³¹² First, the feedlot must be established before the complaining party acquired ownership of his land (priority in time).³¹³ The established date of operation changes if the feedlot's physical facilities are expanded. A feedlot includes confinement or outdoor livestock operations.³¹⁴

³¹¹. See Iowa Code § 172D.2 (1997).

³¹². See *id.*

³¹³. See *id.*

³¹⁴. See *id.* § 172D.1(3).

Second, the feedlot must be following all applicable DNR rules and other zoning requirements.³¹⁵

The second form of agricultural nuisance protection is the agricultural area law.³¹⁶ A farm located within an agricultural area is not a nuisance regardless of any expansion or established date of operation.³¹⁷ This absolute defense to nuisance suits does not apply to violations of state or federal law, negligent operation of the farm, actions arising before the agricultural area was created, pollution of waters, excessive soil erosion not caused by an act of God, or non-approved non-farm uses of land within the designated agricultural area.³¹⁸ An agricultural area must be approved by the Board of Supervisors and all land owners who are a part of the area, and the area must be at least 300 acres in size initially.³¹⁹

The third form of nuisance protection is the animal feeding operation nuisance defense.³²⁰ Any livestock operation in compliance with chapter 455B of Iowa law, which includes most of the state regulations over agriculture, is presumed not to be a nuisance.³²¹ The presumption can be overcome by providing “clear and convincing evidence” that the livestock operation “unreasonably and continuously” interferes with a person’s enjoyment of their property, and that the injury is caused by the negligent operation of the livestock facility.³²² The protection applies to all livestock operations meeting the above conditions, but does not apply to other types of farming operations, such as crop farms.³²³ Finally, a person bringing a frivolous nuisance action is required to pay legal fees to the farmer.³²⁴

Other than nuisance laws, the primary law dealing with odor in Iowa regulates separation distances. Separation distances are based on the type of buildings and manure storage, such as lagoons, earthen basins, formed structures, the size of the operation, and the types of neighboring structures, such as residences, public use areas, and educational or religious institutions.³²⁵ The required distances range from 750 feet to 2500 feet between the neighbor’s buildings and the farmer’s buildings and manure storage structures.³²⁶ All operations with less than 200,000 pounds of animal capacity (400,000 pounds for cattle) are exempt from the requirements unless

³¹⁵. See *id.* § 172D.2.

³¹⁶. See Iowa Code § 352.11(1)(a) (1997).

³¹⁷. See *id.*

³¹⁸. See *id.* § 352.11(1)(b).

³¹⁹. See *id.* § 352.6.

³²⁰. See IOWA CODE ANN. § 657.11 (West Supp. 1997).

³²¹. See *id.*

³²². *Id.*

³²³. See *id.*

³²⁴. See *id.*

³²⁵. See IOWA FARM BUREAU FED’N AND IOWA PORK PRODUCERS ASS’N, IOWA LIVESTOCK ENVIRONMENTAL REGULATIONS 25-29 (1997).

³²⁶. See *id.*

they use an anaerobic lagoon or an earthen manure storage basin.³²⁷ All operations built before May 31, 1995 are exempt from the separation distances, as are those constructed before the “neighbors” built their residence or public building.³²⁸ Any operation can avoid these separation distances by obtaining a written waiver from the owner of the nearby residences or public place. The waiver must be recorded in the county recorder’s office.³²⁹

2. North Carolina

North Carolina law states that a farm cannot be considered a nuisance because of nearby changed conditions if the farm has been in operation for more than one year and was not a nuisance at inception.³³⁰ The nuisance protection does not apply if a farmer is guilty of negligent or improper operation,³³¹ is guilty of water pollution,³³² or if the nature of the farm operation has been fundamentally changed.³³³ North Carolina law also mandates mediation for all nuisance suits unless there is good cause to forego mediation.³³⁴

North Carolina has several other laws dealing with odor, including requiring the following separation distances for swine houses and lagoons:

- a) 1500 feet to occupied dwellings,
- b) 2500 feet to public assemblies (schools, hospitals, churches, parks, historical sites, and child care centers), and
- c) 500 feet to property boundaries.³³⁵

A manure application separation distance of seventy-five feet to any property that has an occupied residence is required.³³⁶ All distances can be waived with written consent of all affected landowners.³³⁷

North Carolina also requires, as part of its manure management plan, that all odor sources on the farm be listed, together with plans to minimize odor from each source.³³⁸

³²⁷. *See id.*

³²⁸. *See id.*

³²⁹. *See* IOWA ADMIN. CODE r. 567-65.11(3) (1996).

³³⁰. *See* N.C. GEN. STAT. § 106-701(a) (1996).

³³¹. *See id.*

³³². *See* N.C. GEN. STAT. § 106-701(a) (1996).

³³³. *See* Durham v. Britt, 451 S.E.2d 1 (N.C. Ct. App. 1994).

³³⁴. *See* N.C. GEN. STAT. § 7A-38.3(c)(4) (1996). The statute also makes provisions for other exemptions from mandatory mediation. *See* N.C. GEN. STAT. § 7A-38.3(c).

³³⁵. *See* Swine Farm Siting Act, H.B. No. 515, § 4.1, 1997 N.C. Sess. Laws 458 (codified as amended at N.C. GEN. STAT. § 106-803 (1997)).

³³⁶. *See id.*

³³⁷. *See* N.C. GEN. STAT. § 106-803(b) (1996).

In 1995, North Carolina added odor control best management practices to its water quality cost share program. Under the cost share program, the state partially pays for best management practice improvements that farmers make on their land.³³⁹ However, no money has yet been used for odor BMPs because local districts who decide how to spend the money have put a higher funding priority on water quality protection BMPs.³⁴⁰ Currently the program does not have enough money to cover odor reduction, but if money were available, some of the approved odor control BMPs would include planting trees for windbreaks and replacing above-lagoon discharge pipes with submerged discharge pipes.³⁴¹ Though no commercial products or secondary containment structures have been approved, they could be approved if found to be both effective and economical.³⁴² The funds are limited to \$75,000 per year per farmer, and the state can only pay 75% of the cost and the farmer must pay the remaining 25%.³⁴³

In this year's legislative session, North Carolina passed a law requiring the Environmental Management Commission to hold hearings and submit a final report on ways to control farm odor by September 1, 1998.³⁴⁴ If economically feasible odor control technology is available by that date, the EMC must adopt temporary rules regulating odor emissions no later than March 1, 1999.³⁴⁵ One impetus for this bill is that ammonia released into the air from livestock (especially large concentrations of pigs) may get absorbed into the ground or water sources.³⁴⁶ The re-absorption is believed by some to be a problem for North Carolina's estuaries on the eastern coast, but others discount it as an unproven theory.³⁴⁷ In Iowa, however, ammonia absorption is usually considered good because it can be absorbed by nearby land in the amount of ten to thirty pounds of nitrogen per acre, which is essentially free nitrogen with no application cost.³⁴⁸

³³⁸. See *id.* § 143-215.10C(e)(1) (1996).

³³⁹. See N.C. GEN. STAT. § 143-215.74(b) (1996).

³⁴⁰. See Telephone Interview with Donna Moffitt, Assistant Director for Non-Point Source Programs, North Carolina Department of Environment and Natural Resources (Aug. 18, 1997).

³⁴¹. See *id.*

³⁴². See *id.*

³⁴³. See N.C. GEN. STAT. § 143-215.74(b) (1996).

³⁴⁴. See Swine Farm Siting Act, H.B. No. 515, §§ 3.1-3.2, 1997 N.C. Sess. Laws 458 (amending N.C. GEN. STAT. § 143-215.107(a) (1997)).

³⁴⁵. See *id.*

³⁴⁶. See Interview with Dr. Stewart Melvin, Professor, Department of Agriculture and Biosystems Engineering, Iowa State University, Ames, Iowa (June 17, 1997).

³⁴⁷. See Telephone Interview with David McLeod, Director of Legal Affairs, North Carolina Department of Agriculture (July 22, 1997).

³⁴⁸. See Interview with Dr. Stewart Melvin, Professor, Department of Agriculture and Biosystems Engineering Department, Iowa State University, Ames, Iowa (June 17, 1997).

3. *Minnesota*

In Minnesota, an agricultural operation is not a nuisance if it has been in operation for more than two years without major expansion (no more than 25% in terms of crops grown or animal raised) or significant alteration of its farming activities (a distinct change and not mere changes in the methods to produce the same crop or products).³⁴⁹ This nuisance protection does not apply to operations that are conducted negligently or improperly, operations not conducted according to generally accepted agricultural practices, or operations acting contrary to any local and state laws or regulations.³⁵⁰ Generally accepted agricultural practices are defined as being located in an agriculturally zoned area and following all applicable federal, state, and local laws.³⁵¹ The nuisance protection also does not apply to those operations with more than 1000 animal units of swine or more than 2500 animal units of cattle, to operations that pollute the waters of the state, or to operations that cause injury or direct threat of injury to the health or safety of any person.³⁵²

Minnesota has no general state odor setback requirements, but most counties do have some minimum setback distances through their local zoning control authority, although the distances vary from county to county.³⁵³

State involvement in the odor issue includes setting ambient air quality standards for hydrogen sulfide emissions, but currently no method is currently approved for accurately measuring the odor levels, a necessary step before the law can be enforced.³⁵⁴ Therefore, the state does not yet directly regulate odor emissions, though such regulation could certainly happen in the near future.³⁵⁵ In addition, the state requires certain types of permitted facilities to mitigate the effects of odors from their farm as decided on a case-by-case basis by the Pollution Control Agency.³⁵⁶

The state also recently passed an appropriation of \$800,000 in order to establish an odor database and rating system.³⁵⁷ The system will eventually be used

³⁴⁹. See MINN. STAT. ANN. § 561.19(1), (2) (West Supp. 1997).

³⁵⁰. See *id.* § 561.19(2)(c)(1).

³⁵¹. See *id.* § 561.19(2)(b).

³⁵². See *id.* § 561.19(2)(c)(2)-(4).

³⁵³. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997); see also Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, Aug. 18, 1997, at 14, 15.

³⁵⁴. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997); see also Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, Aug. 18, 1997, at 14, 15.

³⁵⁵. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997); see also Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, Aug. 18, 1997, at 14, 15.

³⁵⁶. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

³⁵⁷. See Joe Vansickle, *News Update*, NAT'L HOG FARMER, July 15, 1997, at 6.

to get accurate information about odor minimization techniques and products to farmers, to map odor travel patterns, to provide other information to counties who are developing setback laws, and also to provide a database for use in regulating emissions from individual farms once technology finds an accurate methodology.³⁵⁸

4. *Illinois*

An Illinois farm is not a nuisance due to changes to the surrounding locality after the farm has been in operation for one year.³⁵⁹ This protection does not apply if the farm was a nuisance when it began, if it is operated in a negligent or improper manner,³⁶⁰ or if the farm causes any water pollution damage.³⁶¹ In addition, a plaintiff must pay the defendant's legal fees if the defendant wins a final court order or judgment, but any type of settlement is not considered a final judgment.³⁶²

The main odor regulations in Illinois are separation distances. All new livestock management facilities and waste handling systems serving operations of more than fifty, but less than 1000 animal units in size must be located at least 1/4 of a mile from the nearest occupied non-farm residence and 1/2 mile from the nearest populated area.³⁶³ Operations of 1000 or more but less than 7000 animal units must be located at least 1/2 of a mile plus 220 feet for each additional 1000 animal units from any occupied residence, and at least 1/4 mile plus 440 feet for each additional 1000 animal units from any populated area.³⁶⁴ Operations of 7000 or more animal units must be located at least 1/2 mile from any occupied residence and at least one mile from any populated area.³⁶⁵ These setbacks do not apply to operations destroyed or damaged due to natural causes such as tornado, fire, flood, or earthquake, if the structures were built in accordance with previous setback laws, as long as the facilities are reconstructed within two years.³⁶⁶ The above setbacks may be decreased by the Illinois Department of Agriculture if a farmer can show, with verification by a licensed professional engineer, that a certain design will produce more odor protection than the original setbacks.³⁶⁷ The setbacks may also be reduced by the Department if written waivers are obtained from all affected neighbors.³⁶⁸

358. *See id.*

359. *See* 740 ILL. COMP. STAT. ANN. 70/3 (West 1993 & Supp. 1997)

360. *See id.*

361. *See id.* § 70/4.

362. *See id.* § 70/4.5.

363. *See* 510 ILL. COMP. STAT. ANN. 70/35 (c)(3) (West 1993 & Supp. 1997).

364. *See id.* § 77/35 (c)(4).

365. *See id.* § 77/35 (c)(5).

366. *See* ILL. ADMIN. CODE tit. 35, § 506.701(b) (1997).

367. *See id.* § 506.702(f).

368. *See id.* § 506.702(g).

In terms of manure application restrictions, most facilities of more than 1000 animal units may not apply manure within 1/4 of a mile from neighboring residences, unless the manure is injected or incorporated on the day of application.³⁶⁹

Another provision of the Illinois law, that may have an important effect on odor reduction in the future, is a mandate to the Department of Agriculture and the Department of Revenue to recommend to the Illinois Legislature possible income or property tax abatement incentive programs for farmers who purchase equipment that will mitigate odor problems or water quality problems.³⁷⁰

5. *Indiana*

Indiana law states that a continuously operated (*i.e.*, not discontinued for more than one year) agricultural operation is not a nuisance unless it was a nuisance when it began or it is operated negligently.³⁷¹ In addition, the nuisance protection does not apply if the operation had a significant change in its hours of operation or in the type of the operation.³⁷² It is important to note that under Indiana case law, merely increasing the size of the operation is not considered a significant change in the type of operation, and thus would be protected from nuisance suits unless other changes to the operation as a result of the expansion are found to be significant.³⁷³

Indiana does not have any state setback requirements for odor purposes, but some counties have their own setbacks due to local zoning authority.³⁷⁴ A proposal for a state setback requirement of one mile from homes, public and private buildings, parks, and churches was defeated in the 1997 legislature.³⁷⁵

6. *Nebraska*

According to the Nebraska Right to Farm Act, a farming operation is not a nuisance if the operation existed prior to a change in land use or occupancy of land in the locality surrounding the farm, provided that before the change in land use or occupancy the farm would not have been a nuisance.³⁷⁶ The courts have interpreted this to mean that the act applies only for changes in surrounding land use and not for changes taking place on the farm itself.³⁷⁷ The state has provided additional

³⁶⁹. See 510 ILL. COMP. STAT. ANN. 77/20-f-5 (West 1997).

³⁷⁰. See *id.* § 77/45.

³⁷¹. See IND. CODE ANN. § 34-1-52-4 (Michie 1986).

³⁷². See *id.*

³⁷³. See *Laux v. Chopin Land Ass'n.*, 550 N.E.2d 100 (Ind. Ct. App. 1990).

³⁷⁴. See Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 20.

³⁷⁵. See *id.*

³⁷⁶. See NEB. REV. STAT. § 2-4403 (1991).

³⁷⁷. See *Flansburgh v. Coffey*, 370 N.W.2d 127, 131 (Neb. 1985).

protections for farmers through its permit administrative regulations.³⁷⁸ A livestock operation is also not a nuisance if the operation is in compliance with all state and local laws, if reasonable techniques are employed to keep odor, dust, noise, and insects to a minimum, and if the farmer was granted a Nebraska Department of Environmental Quality permit or was inspected and deemed not to need a permit prior to the date the landowner took possession of the land in question.³⁷⁹ Under Nebraska law, it is clear an operation can be a nuisance even though it is not operated negligently and is located in a rural area.³⁸⁰

Nebraska does not have any state odor separation distances, but counties can pass setbacks because of their local zoning authority.³⁸¹ The state considered regulating hydrogen sulfide emissions, but decided the test sites did not indicate sufficient odor problems with hydrogen sulfide levels to justify odor regulations and the costs of enforcement.³⁸²

7. *Missouri*

In Missouri, an agricultural operation is not a nuisance because of changed conditions around the farm if the farm was not a nuisance at inception and the farm has been in operation more than one year.³⁸³ The statute also states that an agricultural operation may reasonably expand acreage or animal units without losing protected status as long as the operation complies with all applicable federal, state, and local laws and regulations and is not operated improperly or negligently.³⁸⁴ In order to keep its nuisance protection, an expanding operation's waste handling capabilities and facilities must meet or exceed minimum recommendations of the University of Missouri Extension Service for storage, processing, and removal of animal wastes.³⁸⁵ Reasonable expansion does not include operations that create a substantially adverse effect on the environment, a hazard to public health and safety, a measurably significant difference in environmental pressures upon neighbors due to increased pollution, or operations that completely relocate a farming operation either within or without the boundaries of the present operation.³⁸⁶ However, reasonable expansion of existing activities is allowed, and protected status once acquired is not lost due to temporary cessation of farming activities or by decreases in the size of the

³⁷⁸. See NEB. ADMIN. R. & REGS. 130(14-001) (1995).

³⁷⁹. See *id.*

³⁸⁰. See J. DAVID AIKEN ET AL., A FARMER'S HANDBOOK ON LIVESTOCK REGULATION IN NEBRASKA 29 (1994).

³⁸¹. See Telephone Interview with Walt Stoeger, Compliance Specialist, Nebraska Department of Environmental Quality (Aug. 18, 1997).

³⁸². See *id.*

³⁸³. See MO. ANN. STAT. § 537.295(1) (West Supp. 1996).

³⁸⁴. See *id.*

³⁸⁵. See *id.*

³⁸⁶. See *id.*

operation.³⁸⁷ The protected status is assignable, inheritable, and alienable.³⁸⁸ Exceptions to this nuisance protection are negligent or improper operation,³⁸⁹ water pollution or overflow of land,³⁹⁰ and location within city limits.³⁹¹ The state also has a loser pays provision for costs and reasonable attorney fees if the court determines a nuisance suit against an agricultural operation is frivolous.³⁹²

Missouri law establishes the following state minimum odor separation distances between confined animal feeding operations (CAFOs), including buildings and lagoons, and public buildings and occupied residences:³⁹³

- (1) CAFOs of 7000 or more animal units must be located at least 3000 feet away,
- (2) CAFOs between 3000 and 6999 animal units must be at least 2000 feet away, and
- (3) CAFOs with at least 1000 animal units must be at least 1000 feet away.³⁹⁴

These distances may be waived by obtaining written consent from all landowners within the buffer distances.³⁹⁵ Distances may also be waived by the Department of Natural Resources if the farming operation can scientifically justify a shorter distance, but any waivers from the Department can be vetoed by the governing body of the county in which the waiver was granted.³⁹⁶ Finally, counties may implement their own separation distances.³⁹⁷

The state also has separation distances for the application of manure. Land application must be done at least fifty feet from the neighbor's property line and application of manure by irrigation must be at least 150 feet from the neighbor's property line.³⁹⁸

³⁸⁷. *See id.*

³⁸⁸. *See id.*

³⁸⁹. *See id.*

³⁹⁰. *See id.* § 537.295(3).

³⁹¹. *See id.* § 537.295(4).

³⁹². *See id.* § 537.295(5).

³⁹³. *See* MO. ANN. STAT. § 640.710(2) (West 1988 & Supp. 1997).

³⁹⁴. *See id.*

³⁹⁵. *See id.* § 640.710(3).

³⁹⁶. *See id.* § 640.710(4).

³⁹⁷. *See id.* § 640.710(5).

³⁹⁸. *See* Don D. Jones & Alan L. Sutton, U.S. Animal Management Regulations: A Review and a Look at What's Coming 16 (Sept. 20-21, 1996) (presented at "Getting the Most from your Manure Resource: Managing Your On-Farm System," Manitoba, Canada) (unpublished manuscript on file with the *Drake Journal of Agricultural Law*).

Missouri exempts livestock farms from air pollution laws.³⁹⁹ The exemption was enacted in 1984 after a 1980 nuisance suit against a hog farm.⁴⁰⁰ The court ordered the hog farmer to make changes to the operation to improve the air quality.⁴⁰¹ The changes were so expensive that the farmer was forced to shut down his operation.⁴⁰² Fears from other farmers, and the difficulties of measuring and regulating were sufficient to get the law passed.⁴⁰³ However Premium Standard Farms entry into Missouri in 1989 has led many citizens to contemplate the repeal of exemption for larger hog farms.⁴⁰⁴

8. *South Dakota*

A South Dakota farm is not a nuisance due to changed conditions surrounding the farm if the farm was not a nuisance when it began and one year has elapsed.⁴⁰⁵ Negligent or improper operation of a farm is not protected,⁴⁰⁶ and neither are damages due to water pollution or overflow of land.⁴⁰⁷ The protected status, once obtained, is assignable, alienable, and inheritable.⁴⁰⁸ Also, the protected status is not lost when farming activities temporarily cease or when the size of the operation diminishes.⁴⁰⁹ The South Dakota nuisance law also protects expansion of existing operations by specifically stating that an increase in animal units or acres will not cause a loss of protected status if all county, municipal, state, and federal environmental laws are followed.⁴¹⁰ Finally, South Dakota has a loser pays rule for any frivolous nuisance suits against agricultural operations, and the defendant can recover both court and lawyer fees.⁴¹¹

South Dakota has local control over separation distances and requirements vary.⁴¹² Some localities require a separation distance of five miles from towns or two miles from rural homes, but some counties have no separation distances at all.⁴¹³

³⁹⁹. See Steve Marbery, *Landowners Seek Revoking of PSF Facility Permits*, FEEDSTUFFS, Aug. 4, 1997, at 5.

⁴⁰⁰. See *id.* at 23.

⁴⁰¹. See *id.*

⁴⁰². See *id.*

⁴⁰³. See *id.*

⁴⁰⁴. See *id.*

⁴⁰⁵. See S.D. CODIFIED LAWS § 21-10-25.2 (Michie 1997).

⁴⁰⁶. See *id.*

⁴⁰⁷. See *id.* § 21-10-25.4.

⁴⁰⁸. See *id.* § 21-10-25.2.

⁴⁰⁹. See *id.*

⁴¹⁰. See *id.*

⁴¹¹. See *id.* § 21-10-25.6.

⁴¹². See Lora Duxbury-Berg, *South Dakota: Turmoil on the Prairie*, NAT'L HOG FARMER, May 15, 1997, at 30.

⁴¹³. See *id.* at 34-35.

9. *Oklahoma*

The fact that an Oklahoma animal feeding operation is licensed pursuant to the new law and is operating in accordance with all rules and regulations of the State Board of Agriculture is prima facie evidence that a nuisance does not exist, if the operation is following all zoning regulations.⁴¹⁴ Also, any properly licensed animal feeding operation, operating in accordance with all state rules and regulations, and located at least three miles outside city limits or over a mile from any ten or more occupied residences, is not a nuisance unless the operation endangers the health or safety of others.⁴¹⁵ The standard of proof for endangerment is a preponderance of the evidence.⁴¹⁶

Recently, Oklahoma passed odor setback requirements based on operation size and location.⁴¹⁷ Any new or expanding animal operation with 2000 or more animal units must construct its facilities at least one-half mile from occupied residences in the eastern half of the state, and three-fourths of a mile in the western half.⁴¹⁸ Any operation that has a capacity of 1000 to 2000 animal units and that uses a liquid animal waste management system must locate its facilities at least one-fourth of a mile from the nearest dwelling in the eastern half of the state, and at least one-half mile from the nearest dwelling in the western half.⁴¹⁹ Operations with 300 to 1000 animal units using liquid waste management systems must be located at least one-fourth of a mile from the nearest occupied residence throughout the entire state.⁴²⁰ Finally, no concentrated animal feeding operation can be built within one mile of ten or more residences,⁴²¹ which means there is a one mile separation distance around cities and towns.

The state has also passed odor separation distances relating to manure application.⁴²² No liquid animal waste can be applied on land within 500 feet of the nearest corner of an occupied residence.⁴²³

Finally, any of these separation distances may be waived by consent of the owner of the effected land. Such consent must be written and recorded with the county recorder of deeds.⁴²⁴

⁴¹⁴. See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, ch. 331, § 16(B), 1997 Okla. Sess. Law Serv. 1978-79 (West) (amending OKLA. STAT. tit. 2 § 9-210).

⁴¹⁵. See *id.*

⁴¹⁶. See *id.*

⁴¹⁷. See *id.*

⁴¹⁸. See *id.* § 17(B) (to be codified at OKLA. STAT. tit. 2, § 9-210.1 (1997)).

⁴¹⁹. See *id.* § 17(C).

⁴²⁰. See *id.* § 17(D).

⁴²¹. See *id.* § 17(F).

⁴²². See *id.*

⁴²³. See *id.* § 17(E).

⁴²⁴. See *id.* § 17(G).

10. Michigan

Michigan takes a different approach. A farm operation is not a nuisance if it existed first and was not a nuisance when it began *or* the farm operation conforms to “generally accepted agricultural and management practices” (GAAMPs) as outlined by the state.⁴²⁵ The GAAMPs include recommendations for manure management, including odor minimization, pesticide management, fertilizer and nutrient management, and animal handling and care.⁴²⁶ These GAAMPs are reviewed annually by the state agriculture commission and updated if necessary.⁴²⁷

C. Analysis and Options for Iowa

For nuisance protection purposes, Iowa’s continuing use of its priority-in-time approach does not appear to present any problems.⁴²⁸ Iowa may want to consider adopting the time limit approach used by several other states, because it may provide certainty for expanding operations.⁴²⁹ Iowa could protect expanding facilities by adopting methods used in South Dakota and Indiana, which allow for expansion in terms of animal units and acres without any loss of protection.⁴³⁰ Another option for Iowa is adoption of Michigan’s novel approach, which provides full nuisance suit protection to all operations, including expanding or new ones, that follow generally accepted environmental practices as outlined by the state commission.⁴³¹ This approach defines what constitutes negligence so farmers and neighbors are not forced to take a dispute to court to determine negligence.⁴³²

Iowa could also change the current exceptions from the nuisance suit protection.⁴³³ For instance, Iowa could place size restrictions on the nuisance protection, similar to Minnesota’s for operations above 1000 animal units, or zoning restrictions in an agricultural area.⁴³⁴ Another option is to adopt Nebraska’s policy of requiring reasonable techniques to minimize odor, noise, dust, and insects.⁴³⁵

⁴²⁵. MICH. COMP. LAWS ANN. § 286.473(3) (West 1996).

⁴²⁶. See Telephone Interview with Sam Hines, Executive Vice President of the Michigan Pork Producers Association (July 17, 1997).

⁴²⁷. See MICH. COMP. LAWS ANN. § 286.473(3) (West 1996).

⁴²⁸. See IOWA CODE § 172D.2 (1997).

⁴²⁹. See *id.*

⁴³⁰. See S.D. CODIFIED LAWS § 21-10-25.2 (Michie 1997); *Laux v. Chopin Land Ass’n.*, 550 N.E.2d 100 (Ind. Ct. App. 1990).

⁴³¹. See MICH. COMP. LAWS ANN. § 286.473(1) (West 1996).

⁴³². See *id.*

⁴³³. See IOWA CODE § 352.11 (1997).

⁴³⁴. See MINN. STAT. ANN. § 561.19(2)(C) (West Supp. 1997).

⁴³⁵. See NEB. ADMIN. R. & REGS. 130(14-001) (1995).

Iowa may also want to explicitly deal with the changing ownership of a livestock operation. South Dakota and Missouri specifically allow an operation's protected status to be assigned, sold, or inherited without loss of status.⁴³⁶ Iowa could reexamine its loser pays provisions, by considering Illinois' requirement that plaintiffs pay for all legal costs if they lose a judgment, instead of Iowa's current requirement that the suit be held frivolous.⁴³⁷ Iowa may also want to adjust its mediation requirements relating to nuisance suits, by giving a violator at least one chance to abate a nuisance before any civil penalties can be issued.

Other state policies attempt to solve the odor and nuisance protection dilemma without resorting to lawsuits based on nuisance laws. Direct regulation of odor emissions is one possibility. Standards would be set based on ammonia, hydrogen sulfide, and other compounds. The biggest obstacle is a lack of knowledge and technology.⁴³⁸ Pig odors can be composed of over 200 different compounds.⁴³⁹ The various combinations and intensities of these compounds is practically limitless and accurate measurement of the composition is both expensive and unreliable at the current time.⁴⁴⁰ The second major problem is related to technology. No uniform standard or definition of what is an acceptable odor has been established. The only current "acceptable" way to determine a "reasonable" standard is by a panel of experts or a jury, who determine what a reasonable level is.⁴⁴¹ Currently, uniform application of a consistent standard to every farm is virtually impossible because of the lack of reliable and affordable testing procedures. In five or ten years the technology may be available, but currently such testing is not feasible. As noted above, Minnesota is still trying to find a way to regulate hydrogen sulfide emissions and North Carolina may regulate ammonia emissions in a few years.⁴⁴² These seem to be the only current attempts at direct odor regulation.⁴⁴³

Iowa could also implement odor control minimization plans in addition to the requirements for obtaining a permit, either as part of the manure management plan or as a separate requirement. The farmer would have to determine the likely effects of odor on nearby neighbors based on wind patterns, size and type of odor sources. The farmer could also be required to list the types of storage structures, any modifications, such as covers, application equipment, commercial products, or other methods used to minimize odor production at the new facility.

⁴³⁶. See S.D. CODIFIED LAWS § 21-10-25.2 (Michie 1997).

⁴³⁷. See 740 ILL. COMP. STAT. ANN. 70/4.5 (West Supp. 1997).

⁴³⁸. See Interview with Dr. Dwaine S. Bundy and Dr. Stewart W. Melvin, Professors of Agricultural and Biosystems Engineering, Iowa State University, Ames, Iowa (July 8, 1997).

⁴³⁹. See *id.*

⁴⁴⁰. See *id.*

⁴⁴¹. See *id.*

⁴⁴². See N.C. GEN. STAT. § 143-215.74(b) (1996); Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

⁴⁴³. See N.C. GEN. STAT. § 143-215.74(b) (1996); Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

A third possible improvement is to institute a direct cost share assistance program similar to North Carolina's,⁴⁴⁴ or to provide tax relief for odor reduction improvements as in Illinois.⁴⁴⁵ Smaller producers could convert to improved technology such as waste injection, hog buildings with biological-filters, and covered manure storage structures. Program management could be modeled on money set aside to help farmers build terraces, close agricultural drainage wells, and other types of environmental improvements. The funds or tax breaks could help smaller operations adopt new odor reduction technology without subsidizing improvement by the larger operations that many feel the large operations should make on their own. Whether limited to small farms or not, such a program would provide incentives for farmers to reduce odor using approved methods or products. However, it may be difficult to fund the program, and to establish which odor reduction methods or products actually work in a cost effective manner.

A fourth possibility would be to require livestock producers to negotiate for odor easements with neighbors within a certain distance in order to receive a permit.⁴⁴⁶ The agreement could provide for a one-time negotiated amount or an annually renegotiated amount.⁴⁴⁷ Once the initial compensation is determined, perhaps with the aid of a mediator, then the burden would be on the party wishing to change the compensation or other terms of the easement.⁴⁴⁸ For example, if the neighbor felt that the farm's odor had substantially increased over time and therefore wanted increased compensation, then the neighbor would have to prove the contention to a mediator, arbitrator, or judge.⁴⁴⁹ On the other hand, if a farmer felt that he was doing a much better job of controlling odors, then he could ask for a reduction in compensation and would also have to prove his case, possibly by showing use of new equipment or management methods.⁴⁵⁰ This solution to the odor problem would require rescission of the nuisance suit protection provided by HF 519 in 1995 and would mean a return to common law remedies for nuisance.⁴⁵¹ Adjustments might also be required to the other two agricultural nuisance suit statutes in Iowa law.⁴⁵² The program could be implemented on a trial basis in selected counties to see how it works, because no other state has tried this

⁴⁴⁴. See N.C. GEN. STAT. § 143-215.74(b) (1996).

⁴⁴⁵. See 510 ILL. COMP. STAT. ANN. 70/45 (West 1997).

⁴⁴⁶. See Neil E. Harl, A Different Approach to Feedlot Odors (July 5, 1995) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*); Interview with Neil E. Harl, Professor, Department of Agriculture and Economics, Iowa State University, Ames, Iowa (July 8, 1997).

⁴⁴⁷. See Neil E. Harl, A Different Approach to Feedlot Odors (July 5, 1995) (unpublished manuscript, on file with the *Drake Journal of Agricultural Law*).

⁴⁴⁸. See *id.*

⁴⁴⁹. See *id.*

⁴⁵⁰. See *id.*

⁴⁵¹. See *id.*

⁴⁵². See *id.*

approach.⁴⁵³ The agreement would be tied to the land and recorded in the county recorder's office, so a person buying or selling the land would be on notice of the agreements.⁴⁵⁴ The greatest advantage of this system is that neighbors work out odor issues directly, without much governmental involvement, in an area that varies from farm to farm.⁴⁵⁵ It also rewards producers, small and large, who do a good job managing odors because they theoretically will only pay a small compensation amount or none at all.⁴⁵⁶ Finally, the program encourages farmers to continue to improve their farms by minimizing odors.⁴⁵⁷ The negative aspect to a system of negotiated easements is that farmers will incur new costs that they have not been required to pay in the past, because of the positive externalities that the hog industry created. This could have a major impact on the size and nature of Iowa's pork industry in the future.⁴⁵⁸ Also, some protection should be provided against "unreasonable" neighbors who may be unwilling to compromise and prefer to stop pork production at all costs.⁴⁵⁹

A fifth option is to simply increase separation distances and continue to allow farmers and neighbors to waive by contract the minimum separation distances. Iowa could change the current separation distance laws based on size, type of storage, and local environmental characteristics. Any additional separation distance requirements could still be waived by contract by individual producers and neighbors, although it could cost the producers some money. This idea would reward producers who have close ties to the community and reputations for being good neighbors. The contracting would also allow the farmers and neighbors to discuss the farmer's odor control reduction methods employed and to be informed of the practices. The downside of this practice is that neighbors may see this as a way to make some money at the expense of the farmer, or they may not allow any expansion of livestock production at all.

Another possible option is to grant counties local zoning control over siting of livestock buildings and waste containment structures. If a county grants approval, the farmer is protected from nuisance suits. The zoning could simply be an added requirement, much like an agricultural area designation, before it receives the added protection of HF 519. Operations that did not receive county approval could still build, but these operations would have to rely on their own odor reduction equipment and methods instead of being protected by the state. This option has both benefits and costs. If county control was limited to odors, and water quality and permits were left to the state, then perhaps local residents could gain some control without hurting

⁴⁵³. *See id.*

⁴⁵⁴. *See id.*

⁴⁵⁵. *See id.*

⁴⁵⁶. *See id.*

⁴⁵⁷. *See id.*

⁴⁵⁸. *See id.*

⁴⁵⁹. *See id.*

the ability of Iowa pork producers (at least those who are “good” neighbors) to expand their operations. The problem of odor is more subjective than other issues surrounding hog production, so perhaps the odor issue should be left to local control. Counties could resolve the odor issue in different ways, such as appointing “odor commissioners,” as they do now for fence disputes, to mediate problems before they get out of hand. The counties could be granted absolute control over siting, or there could be an appeals process through the state for producers and citizens if county decisions were not based on “reasonable” scientific evidence.

D. Conclusion

There is no simple answer to the question of nuisance suit protection for farmers and odor minimization protection for neighbors. Solutions must take into account protections of the environment, protection of Iowa’s pork industry, and resolution of conflicts between neighbors. Any changes must consider all factors, and decision makers must balance Iowa’s long-term economic needs with its long-term quality of life and environmental needs.

There appear to be a number of options available to Iowa that could reduce the problems of odor in the state. However, each “solution” is potentially costly, it is politically tough to decide who should bear those costs, and researchers are still attempting to discover effective ways to deal with odors. Therefore, it may be wise for the state to take a cautious approach in order to allow researchers to find answers. In the meantime, the state should be proactive in encouraging farmers to adopt practices and products already shown to effectively reduce odor.

V. ENFORCEMENT PROCEDURES AND LOCAL CONTROL

A. Introduction

One of the most controversial issues in Iowa today is the subject of state versus local control over the regulation of livestock production. The major issue to decide is what aspects of livestock production should be controlled by the State, as opposed to the county or to individuals themselves. The range of possible local control extends to all aspects of livestock production. This includes zoning authority, control over permit issuance, control over enforcement and inspections, environmental control, and control over corporate farming.

The issue of regulatory control, and the procedures to enforce state or local laws, varies from state to state regarding pork and other livestock production. Each state has its own regulatory body and its own particular mix of state and local laws.

One key issue to answer is which governmental body will do the enforcing. The answer is that it is typically a mixture of the state’s Department of Natural Resources, Department of Agriculture, Attorney General, citizen-appointed oversight commissions, and any potential local authorities. The next decision to make is to allocate authority over the initiation of investigations, the investigations themselves,

regular inspections, settlement, and prosecution of crimes among the different governmental bodies. Finally, the state must decide on an appropriate penalty structure and the frequency of inspections.

This section of the Note will try to summarize the current state of the law in this area for Iowa and the other major pork producing states, and then will summarize the options available to Iowa.

B. State-by-State Laws

1. Iowa

Currently, the issue of local control in Iowa is very unsettled. Humboldt County passed several ordinances related to pork production, and an Iowa district court upheld three of the four ordinances.⁴⁶⁰ On appeal, the Iowa Supreme Court issued an injunction to stop the enforcement of those ordinances until the court rules on the constitutionality of local control over livestock production.⁴⁶¹ Agricultural activities in Iowa have traditionally been exempt from local zoning laws and it is being argued that the local laws either conflict with state law or that local control has been preempted because the state passed a comprehensive bill regulating livestock production in 1995.⁴⁶² In addition to Humboldt County, Wayne,⁴⁶³ Taylor,⁴⁶⁴ and Clarke County have passed their own ordinances.⁴⁶⁵ Also, Hardin,⁴⁶⁶ Union, Van Buren, Davis, Pocahontas, Carroll, Allamakee, and Tama Counties are all considering their own local ordinances, although most counties appear to be waiting for the Iowa Supreme Court decision on Humboldt County's ordinances.⁴⁶⁷ Even after the Iowa Supreme Court's decision, the issue could be in doubt because the legislature could nullify by enactment any decision based on preemption.

Enforcement is a settled issue when the only laws are state laws. In short, the Iowa Department of Natural Resources (DNR) is responsible for proposing rules to implement most livestock-related legislation and is also responsible for enforcing

⁴⁶⁰. See Jerry Perkins, *Humboldt Livestock Ordinances Delayed*, DES MOINES REG., June 14, 1997, at 11S-12S; Joe Vansickle, *Battles Continue in Many States*, NAT'L HOG FARMER, July 15, 1997, at 26.

⁴⁶¹. See Jerry Perkins, *Humboldt Livestock Ordinances Delayed*, DES MOINES REG., June 14, 1997, at 11S-12S; Joe Vansickle, *Battles Continue in Many States*, NAT'L HOG FARMER, July 15, 1997, at 26.

⁴⁶². See Jerry Perkins, *Humboldt Livestock Ordinances Delayed*, DES MOINES REG., June 14, 1997, at 11S-12S; Joe Vansickle, *Battles Continue in Many States*, NAT'L HOG FARMER, July 15, 1997, at 26.

⁴⁶³. See Wayne County Ia., Ordinance 97-01 (adopted June 23, 1997); *Counties Discuss Adoption of Livestock Ordinances*, SPOKESMAN, Aug. 9, 1997, at 3.

⁴⁶⁴. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, Aug. 18, 1997, at 14.

⁴⁶⁵. See *id.*

⁴⁶⁶. See *Counties Discuss Adoption of Livestock Ordinances*, SPOKESMAN, Aug. 9, 1997 at 3.

⁴⁶⁷. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, Aug. 18, 1997, at 15.

those laws and corresponding regulations.⁴⁶⁸ The responsibility includes any type of water pollution, manure handling, or other type of violation.⁴⁶⁹ Enforcement actions can begin by self-reporting, reporting by any citizen who believes a violation has occurred, or by independent state action.⁴⁷⁰ Once a possible violation is reported, the DNR investigates by either gaining permission from the farmer to inspect or by getting a search warrant.⁴⁷¹ The DNR has the authority to impose fines of up to \$3000.⁴⁷²

The Environmental Protection Commission (EPC), a nine member board appointed by the Governor and approved by the Senate, supervises the DNR.⁴⁷³ The Commission must approve all penalties over \$3000, review and act on proposed DNR regulations, and approve the referral for prosecution of any enforcement action to the Attorney General.⁴⁷⁴

An individual in violation of any of Iowa's environmental and related laws can be both civilly and criminally punished.⁴⁷⁵ The civil penalties are limited to no more than \$5000 for each day of violation and increased to \$25,000 per day if the individual is a habitual violator.⁴⁷⁶ Criminal penalties can also be imposed for "negligent or knowing" violations.⁴⁷⁷ A first time "negligent" violator can be fined up to \$25,000 per day or imprisonment for no more than a year, or both.⁴⁷⁸ A first time "knowing" violation is punishable up to \$50,000 per day or no more than two years in prison, or both.⁴⁷⁹ The penalties increase for second and subsequent violations.⁴⁸⁰ Violators may also be required to pay restitution for costs of clean-up and fish replacement, in addition to the above fines.⁴⁸¹ Any violations of manure management plans are limited solely to civil, rather than criminal, penalties.⁴⁸²

From January 1992 to June 1994, there were twenty-two enforcement actions in Iowa and fifteen were against pork producers, with fines ranging from \$100 to

⁴⁶⁸. IOWA FARM BUREAU FED'N & IOWA PORK PRODUCERS ASS'N, IOWA LIVESTOCK ENVIRONMENTAL REGULATIONS 42-45 (1997).

⁴⁶⁹. *See id.*

⁴⁷⁰. *See id.*

⁴⁷¹. *See id.*

⁴⁷². *See id.*

⁴⁷³. *See id.*

⁴⁷⁴. *See id.*

⁴⁷⁵. *See id.*

⁴⁷⁶. *See id.*

⁴⁷⁷. *See id.*

⁴⁷⁸. *See id.*

⁴⁷⁹. *See id.*

⁴⁸⁰. *See id.*

⁴⁸¹. *See id.*

⁴⁸². *See id.*

\$12,500.⁴⁸³ In addition, the Attorney General brought one criminal action and two civil actions against pork operations.⁴⁸⁴

2. *North Carolina*

Until the last legislative session was through, the state controlled almost all regulation and enforcement related to North Carolina livestock production. Now the state has explicitly granted counties agricultural zoning authority over any swine farms having an animal waste management system with a capacity of 600,000 pounds or more (approximately 4000 pigs at an average weight of 150 pounds).⁴⁸⁵ The only limitation on the counties is that local zoning regulations may not entirely exclude the 600,000 pound capacity swine farms from the jurisdiction.⁴⁸⁶ Farms under the 600,000 pound limit are not subject to local zoning regulations.⁴⁸⁷

Four state government bodies are involved with enforcement and regulatory oversight. First, the Department of Environment and Natural Resources has two separate divisions responsible for aspects of hog operations.⁴⁸⁸ The Division of Water Quality (DWQ, formerly known as the Division of Environmental Management), is responsible for implementing the permitting process, investigating facilities, and enforcing the laws.⁴⁸⁹ The DWQ conducts at least one inspection for every permitted facility. The inspection mainly consists of checking manure application records and visually examining the site.⁴⁹⁰

The regulatory duties are shared with the Division of Soil and Water Conservation.⁴⁹¹ The division's main purpose is to provide technical assistance to livestock farmers by conducting annual operational reviews of every permitted facility.⁴⁹² This is essentially an entirely separate inspection and any serious violations must be reported immediately to the DWQ.⁴⁹³ The operational reviews and inspections are carried out by approximately thirty different soil and water

⁴⁸³. See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 8 (1996).

⁴⁸⁴. See *id.*

⁴⁸⁵. See Clean Water Responsibility and Environmentally Sound Policy Act, H.B. No. 515, §1.1(a), 1997 N.C. Sess. Laws 458.

⁴⁸⁶. See *id.*

⁴⁸⁷. See *id.*

⁴⁸⁸. See Telephone Interview with Carroll Pierce, Assistant Director for Technical Services, Division of Soil and Water Conservation, North Carolina Department of Environment and Natural Resources (July 22, 1997 and Aug. 7, 1997).

⁴⁸⁹. See *id.*

⁴⁹⁰. See *id.*; N.C. GEN. STAT. § 143-215.10F (1996).

⁴⁹¹. See N.C. GEN. STAT. § 143-215.10D (1996).

⁴⁹². See *id.*

⁴⁹³. See *id.* § 143-215.10E.

technicians within the Department.⁴⁹⁴ Every permitted facility in North Carolina will be inspected twice yearly, one an operations review by the Division of Soil and Water Conservation and the other a DWQ inspection.

Whenever a violation is discovered or a complaint is made, the DWQ is responsible for investigating.⁴⁹⁵ The DWQ will complete an inspection form and submit a report.⁴⁹⁶ Both documents include details of the investigation, aggravating or mitigating factors, and recommendations for future actions, such as clean-up procedures, fines, or changes in operation.⁴⁹⁷ The report and inspection forms are then sent to the Environmental Management Commission (EMC).⁴⁹⁸ The EMC has authority to approve all penalties, and will prepare a final order together with any fines and then give the livestock producer a chance to appeal the ruling.⁴⁹⁹ If any prosecutions are necessary, the EMC will refer the case to the Attorney General.⁵⁰⁰ The recently passed law includes a section stating that any waste discharge involving the possible commission of a felony must be referred to the State Bureau of Investigation, which has the authority to conduct its own investigation.⁵⁰¹

During the two-and-a-half year period ending in June 1994, there were fifty-one enforcement actions by the EMC.⁵⁰² The fines averaged \$3000 plus costs, and ranged from \$308 to \$5896.⁵⁰³ Of the fifty-one actions, forty-three were pork operations and of those thirty-one involved overflowing lagoons, lagoon dike failures, or leaky transfer or discharge pipes.⁵⁰⁴ Recently, the most typical violations concern structural maintenance problems or violations of the manure management plans.⁵⁰⁵

⁴⁹⁴. See Telephone Interview with David McLeod, Director of Legal Affairs, North Carolina Department of Agriculture (July 22, 1997).

⁴⁹⁵. See Telephone Interview with Carroll Pierce, Assistant Director for Technical Services, Division of Soil and Water Conservation, North Carolina Department of Environment and Natural Resources (July 22, 1997).

⁴⁹⁶. See *id.*; NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 11 (1996).

⁴⁹⁷. See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 11 (1996).

⁴⁹⁸. See *id.*

⁴⁹⁹. See *id.*

⁵⁰⁰. See Telephone Interview with Carroll Pierce, Assistant Director for Technical Services, Division of Soil and Water Conservation, North Carolina Department of Environment and Natural Resources (July 22, 1997).

⁵⁰¹. See Clean Water Responsibility and Environmentally Sound Policy Act, H.B. No. 515, § 1.1(a), 1997 N.C. Sess. Laws 458.

⁵⁰². See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 11 (1996).

⁵⁰³. See *id.*

⁵⁰⁴. See *id.* at 11-12.

⁵⁰⁵. See Telephone Interview with Carroll Pierce, Assistant Director for Technical Services, Division of Soil and Water Conservation, North Carolina Department of Environment and Natural

The DWQ normally handles emergency responses after spills or other problems.⁵⁰⁶ One permit requirement is that farmers agree to follow departmental rules on what actions must be taken in the event of spills or other emergencies.⁵⁰⁷

The recent legislative session also changed North Carolina's penalty scheme. The law directs the EMC to set up a graduated violation points system for swine farms, so that more severe violations result in more severe punishment.⁵⁰⁸ Serious harm to the state's natural resources or willful and intentional violations are to be punished most severely and three significant violations within a five year period, or minor violations adding up to a certain point total, would result in a mandatory permit revocation.⁵⁰⁹

3. *Minnesota*

In Minnesota, each county has local control over zoning, environmental rules, fees, setbacks, and enforcement.⁵¹⁰ The Minnesota Pollution Control Agency is the primary enforcement body for the state and county feedlot officers (CFOs) are responsible for some enforcement in forty-five Minnesota counties.⁵¹¹ Most counties with a substantial amount of agriculture have their own CFOs, but other counties let the state handle it.⁵¹² The PCA and the CFOs have authority over permitting, inspections, and enforcement.⁵¹³

Inspections generally occur at construction and after complaints.⁵¹⁴ At this time, neither random nor regular inspections take place except when permits are renewed.⁵¹⁵ A total of 1100 inspections were completed last year by nineteen state PCA staff persons and forty-five county feedlot officers.⁵¹⁶

When either the PCA or county feedlot officer discovers a violation, the county attorney is contacted and both parties work together to settle the case or prosecute

Resources (July 22, 1997). Two farms have been shut down for leaking tanks and transfer pipes and manure management plan violations such as planting corn or cotton, instead of Bermuda grass, which consumes the most nitrogen. *See id.*

⁵⁰⁶. *See* Telephone Interview with David McLeod, Director of Legal Affairs, North Carolina Department of Agriculture (July 22, 1997).

⁵⁰⁷. *See id.*

⁵⁰⁸. *See* Clean Water Responsibility and Environmentally Sound Policy Act, H.B. No. 515, § 10.1, 1997 N.C. Sess. Laws 458 (codified at N.C. GEN. STAT. § 143-215.6E (1997)).

⁵⁰⁹. *See id.*

⁵¹⁰. *See* Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 18.

⁵¹¹. *See* Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

⁵¹². *See id.*

⁵¹³. *See id.*

⁵¹⁴. *See* Telephone Interview with Dave Nelson, Feedlot Unit Supervisor, Minnesota Pollution Control Agency (July 31, 1997).

⁵¹⁵. *See id.*

⁵¹⁶. *See id.*

criminally if necessary.⁵¹⁷ The Attorney General only intervenes if the county attorney requests help.⁵¹⁸ There were sixteen enforcement actions between January 1992 and June 1994, including four actions for hog operations, three for poultry, five for cattle, and three dairy and poultry mixed.⁵¹⁹ There have been approximately twenty-five criminal actions over the past few years, all intentional pollution violations, but only one went to trial.⁵²⁰ In that case, a farmer intentionally pumped manure into a tile line late one holiday night.⁵²¹ The farmer was banned from farming in Minnesota for two years.⁵²² Other than intentional or negligent management, the other major problem the state has faced is poor manure storage design and cheap construction.⁵²³ This is especially true for some contract finishing sites, but the situation has improved due to construction monitoring through the interim or construction permits.⁵²⁴

Emergency spills response is also handled by the PCA and local CFOs. Farmers must contact the state's 24-hour emergency hotline as soon as possible. The nearest available PCA staff person or CFO will go to the site.⁵²⁵ For major spills the state Department of Natural Resources usually goes to the site.⁵²⁶

4. *Illinois*

Illinois has 102 counties and currently has no local control.⁵²⁷ A proposal to allow county regulation of operations with more than 500 animal units was defeated in the 1997 legislature.⁵²⁸

The Illinois Department of Agriculture is responsible for enforcing its own requirements, including lagoon registration, manure management plans, intent-to-construct letters, and the certified livestock managers program.

⁵¹⁷. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

⁵¹⁸. See *id.*

⁵¹⁹. See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 10 (1996).

⁵²⁰. See Telephone Interview with Rick Cool, Pollution Control Agency Representative, Minnesota Attorney General's Office (July 29, 1997).

⁵²¹. See Telephone Interview with Dave Nelson, Feedlot Unit Supervisor, Minnesota Pollution Control Agency (July 31, 1997).

⁵²². See *id.* The farmer did try to start farming in Kansas afterwards. See *id.*

⁵²³. See *id.*

⁵²⁴. See *id.*

⁵²⁵. See *id.* Farmers must call within twenty-four hours. See *id.*

⁵²⁶. See *id.*

⁵²⁷. See Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 19.

⁵²⁸. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, May 26, 1997, at 16.

The Illinois EPA, on the other hand, is responsible for conducting investigations, handling complaints, enforcing the state's water quality laws, and beginning the settlement and clean-up process after spills.⁵²⁹ The EPA has no direct enforcement authority because the Pollution Control Board and lower courts actually hear the cases and determine any necessary fines.⁵³⁰ The Attorney General prosecutes cases for both the EPA and the Department of Agriculture, but only after a referral by one of the agencies.⁵³¹ There were seven enforcement actions from January 1992 and June 1994.⁵³² All of the actions were for water quality violations; six involved pork operations and the other involved a dairy. The fines ranged from \$750 to \$31,405.⁵³³ Between 1985 and 1994, EPA investigated 254 manure leaks, but most leaks were substantially smaller than the recent 800,000 gallon spill from a Hancock County 600 sow unit lagoon in July.⁵³⁴

Finally, the Pollution Control Board is responsible for rule-making in the area of hog regulations and also has authority to adopt emergency regulations, which it did in October 1996.⁵³⁵

5. *Indiana*

All but sixteen counties in Indiana have local zoning authority over livestock production and the extent of regulation varies from county to county.⁵³⁶ Local laws generally deal with siting, but the state regulation is mostly concerned with water quality issues. Local authorities are responsible for enforcing local laws.⁵³⁷

The Indiana Department of Environmental Management (DEM) enforces state law. The system is complaint-driven with no annual inspections, except for an initial inspection for verification and approval of all submitted animal waste plans.⁵³⁸ The

⁵²⁹. See Telephone Interview with Warren Goetsch, Bureau Chief of Environmental Programs, Illinois Department of Agriculture (Aug. 5, 1997).

⁵³⁰. See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 7 (1996).

⁵³¹. See Telephone Interview with Julie King, Special Counsel to the Director, Illinois Department of Agriculture (July 15, 1997).

⁵³². See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 7 (1996).

⁵³³. See *id.*

⁵³⁴. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, July 21, 1997, at 15.

⁵³⁵. See ILL. ADMIN. CODE tit. 35, § 505 (1996) (superseded by ILL ADMIN. CODE tit. 35, § 506).

⁵³⁶. See Joe Vansickle, *States Go to War Over the Environment*, NAT'L HOG FARMER, May 15, 1997, at 20.

⁵³⁷. See Telephone Interview with Fred Teague, Environmental Scientist, Indiana Department of Environmental Management (Aug. 11, 1997).

⁵³⁸. See Telephone Interview with Fred Teague, Environmental Scientist, Indiana Department of Environmental Management (July 15, 1997).

DEM issues either an agreed order or an emergency order for violations.⁵³⁹ The agreed order is usually negotiated with the farmer and outlines any corrective measures to be taken and any fines to be paid.⁵⁴⁰ Emergency orders are issued when emergencies arise or when negotiations with the farmer break down.⁵⁴¹ There were seven enforcement actions from January 1992 to June 1994.⁵⁴² Four of the violations were illegal discharges and the other three were for improper land application of manure. Six of the violators were pork operations, and the fines ranged from \$1800 to \$30,000.⁵⁴³

There are several different types of penalties that may be imposed on violators. First, the fines for violating Indiana laws or rules adopted by the DEM can be up to \$25,000 per day.⁵⁴⁴ A person violating an emergency order issued by the DEM is subject to penalties of up to \$500 per hour and any misrepresentations on permit applications are considered a class B misdemeanor with a penalty of up to 180 days in prison and a \$10,000 fine.⁵⁴⁵ Finally, intentionally, recklessly, or negligently violating the laws is a class D felony with a maximum penalty of one and a half years in prison and fines of \$2500 to \$25,000 per day.⁵⁴⁶ If there are aggravating circumstances, prison time can be extended to three years; if there are mitigating circumstances, the time served can be reduced by one year.⁵⁴⁷ The fine for the second and subsequent violations can be no higher than \$50,000 per day.⁵⁴⁸

The DEM also handles emergency responses for spills. The DEM must be notified of any surface water pollution within two hours.⁵⁴⁹ The DEM will then send an emergency spill team to the site to stop the pollution and minimize the damage.⁵⁵⁰ There is no specific plan to deal with groundwater pollution or clean up because the problem has not yet occurred.⁵⁵¹

⁵³⁹. See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 7 (1996).

⁵⁴⁰. See *id.*

⁵⁴¹. See *id.*

⁵⁴². See *id.*

⁵⁴³. See *id.*

⁵⁴⁴. See JOHN D. COPELAND, NATIONAL CTR. FOR AGRIC. LAW RESEARCH AND INFO., ENVIRONMENTAL LAWS IMPACTING INDIANA LIVESTOCK PRODUCERS (1994).

⁵⁴⁵. See *id.*

⁵⁴⁶. See *id.*

⁵⁴⁷. See *id.*

⁵⁴⁸. See *id.*

⁵⁴⁹. See Telephone Interview with Fred Teague, Environmental Scientist, Indiana Department of Environmental Management (July 15, 1997).

⁵⁵⁰. See *id.*

⁵⁵¹. See *id.*

6. *Nebraska*

Nebraska also has local control over livestock production.⁵⁵² Many counties prohibit home building near confined livestock operations unless the builders agree to give up their rights to sue existing farmers. Other counties limit their regulations to certain farms based on size, livestock-per-acre ratio, or farms that do not raise their own crops.⁵⁵³ The county board of supervisors, planning commission, and board of adjustment handle the local zoning issues through a lengthy and in-depth rule adoption process.⁵⁵⁴ As noted previously, the state also has natural resource districts which can request “local” control in order to protect groundwater from agricultural and other pollutants.⁵⁵⁵

The Nebraska Department of Environmental Quality (NDEQ) handles complaints, inspections, investigations, and initiation of enforcement actions, and also initiates the settlement process.⁵⁵⁶ Most fines need the approval of the Attorney General, including all fish kill fines.⁵⁵⁷ The NDEQ enforces state laws and local authorities enforce local laws.⁵⁵⁸ There were six state enforcement actions from January 1992 to June of 1994.⁵⁵⁹ All were illegal discharge violations, four were by pork operations, and the fines ranged from \$50 to \$9826.⁵⁶⁰ The Attorney General and county attorneys can also enforce the regulations.⁵⁶¹

Inspections are mostly complaint-driven because staffing limitations preclude regular inspections.⁵⁶² There are three full-time investigators in the eastern part of the state and one part-time investigator in the western half.⁵⁶³ The NPDES permitted facilities generally have their records and site checked, but other operations normally just get site-checked.⁵⁶⁴ The NDEQ has the authority to perform random or regular inspections, but has not exercised that authority to any great extent.⁵⁶⁵

⁵⁵². See J. DAVID AIKEN ET AL., A FARMER’S HANDBOOK ON LIVESTOCK REGULATION IN NEBRASKA 11 (1994).

⁵⁵³. See *id.*

⁵⁵⁴. See *id.*

⁵⁵⁵. See *id.* at 7.

⁵⁵⁶. See Telephone Interview with Walt Stoeger, Compliance Specialist, Nebraska Department of Environmental Quality (Aug. 5, 1997).

⁵⁵⁷. See *id.*

⁵⁵⁸. See *id.*

⁵⁵⁹. See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 11 (1996).

⁵⁶⁰. See *id.*

⁵⁶¹. See *id.*

⁵⁶². See Telephone Interview with Walt Stoeger, Compliance Specialist, Nebraska Department of Environmental Quality (Aug. 5, 1997).

⁵⁶³. See *id.*

⁵⁶⁴. See *id.*

⁵⁶⁵. See *id.*

In an emergency response situation, the NDEQ will send one of their representatives to the site.⁵⁶⁶ Operations with NPDES permits must call the NDEQ within twenty-four hours of any spills. Other operations are supposed to call the NDEQ but are not specifically required to do so.⁵⁶⁷

Finally, existing operations have one year to conform their operations to any changes in title 130, the source of most state regulation of hog production.⁵⁶⁸

7. *Missouri*

Missouri also has local control, but most counties have chosen not to exercise it.⁵⁶⁹ If the counties do pass their own laws, they are responsible for enforcement without state assistance.⁵⁷⁰ The Missouri Supreme Court recently ruled that townships do not have the statutory authority to regulate pork production facilities, nor to bring a public nuisance action.⁵⁷¹

At the state level, the Missouri Department of Natural Resources (DNR) is responsible for most enforcement action.⁵⁷² The DNR is responsible for inspections, investigations, emergency response (with a twenty-four hour notice requirement), and settlement negotiations.⁵⁷³ A Clean Water Commission has been set up to determine which cases should be referred to the Attorney General and the Attorney General then negotiates the settlement or prosecutes the case.⁵⁷⁴ The Attorney General usually signs any settlements, even if not actively involved in the settlement process.⁵⁷⁵ There were eleven enforcement actions between January 1992 and June 1994 and an additional fifteen violations pending in June 1994.⁵⁷⁶ Eight of the violations were by pork operations with fines ranging from \$500 to \$14,000, and all violations were for illegal discharges or lagoon leakage.⁵⁷⁷ The most typical

⁵⁶⁶. *See id.* (Aug. 18, 1997).

⁵⁶⁷. *See id.*

⁵⁶⁸. *See* NEB. ADMIN. R. & REGS. 130(13) (1995).

⁵⁶⁹. *See* Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

⁵⁷⁰. *See id.*

⁵⁷¹. *See* *Premium Standard Farms, Inc. v. Lincoln Township*, 946 S.W.2d. 234, 239-40 (Mo. 1997).

⁵⁷². *See* Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Water Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

⁵⁷³. *See id.*

⁵⁷⁴. *See id.*

⁵⁷⁵. *See* NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 10 (1996).

⁵⁷⁶. *See id.*

⁵⁷⁷. *See id.*

violations have been for equipment or structural breakdowns or for operator negligence.⁵⁷⁸

The DNR is responsible for inspections, including site and record checks.⁵⁷⁹ The inspections usually are done with advance notice, but the DNR has the authority to conduct surprise inspections.⁵⁸⁰ The DNR has not reached the goal of inspecting each permitted facility annually because the Department currently has the equivalent of only one full-time inspector among the six regional field offices.⁵⁸¹ The number of inspectors will increase to four full-time equivalent inspectors soon.⁵⁸² The new 1996 law requires inspection of all Class IA facilities four times a year. Class IA facilities are those with more than 7000 animal units, and essentially includes all the big flush systems.⁵⁸³ Other requirements for these facilities include visual inspections every twelve hours by farm employees, records kept for three years, electronic or mechanical shutoff,⁵⁸⁴ a containment structure or earthen dam built if the DNR feels there is a risk to public waters,⁵⁸⁵ and all unauthorized spills must be reported to the DNR and adjoining landowners within twenty-four hours.⁵⁸⁶

8. *South Dakota*

South Dakota also has local county control and regulations and zoning ordinances vary widely from county to county.⁵⁸⁷ Hyde County recently voted 453 to 349 to enact a four mile separation distance requirement between homes and hog buildings with more than 1250 hogs.⁵⁸⁸ This ordinance is being challenged in the South Dakota court system on the theory that the environmental rules recently passed by the state preempt local control, and that using a public referendum to pass the zoning laws was illegal.⁵⁸⁹

The Department of Environment and Natural Resources (DENR) handles complaints and routine inspections.⁵⁹⁰ All permitted facilities are inspected during

⁵⁷⁸. See Telephone Interview with Ken Arnold, Unit Chief for Land Applications, Air Pollution Control Program, Missouri Department of Natural Resources (Aug. 4, 1997).

⁵⁷⁹. See *id.*

⁵⁸⁰. See *id.*

⁵⁸¹. See *id.*

⁵⁸². See *id.*

⁵⁸³. See MO. ANN. STAT. § 640.750 (West Supp. 1997).

⁵⁸⁴. See *id.* § 640.725.

⁵⁸⁵. See *id.* § 640.730.

⁵⁸⁶. See *id.* § 640.735.

⁵⁸⁷. See Lora Duxbury-Berg, *South Dakota: Turmoil on the Prairie*, NAT'L HOG FARMER, May 15, 1997, at 34-35.

⁵⁸⁸. See *id.*

⁵⁸⁹. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, Aug. 18, 1997, at 15.

⁵⁹⁰. See Telephone Interview with Tim Tollefsrud, Administrator, South Dakota Department of Environment and Natural Resources (July 22, 1997).

or after construction and the state is attempting to inspect all permitted operations at least once a year.⁵⁹¹ The legislature has ordered the DENR to revise and update its rules concerning inspection procedures and their frequency and the DENR is in the process of doing so.⁵⁹² There were no reported enforcement actions between the period of January 1992 and June 1994.⁵⁹³ One possible reason for this may be South Dakota's strong anti-corporate farming laws; but it could also be due to the fact that South Dakota has lost one third of its pork production and half of its hog farmers over the past six years, and has not faced hardly any expansion "growing pains."⁵⁹⁴

The DENR controls most enforcement of state laws and settlement negotiation.⁵⁹⁵ When spills occur, farmers must notify the DENR at least within twenty-four hours and must take steps to minimize the damage.⁵⁹⁶ Upon notification the DENR will send someone to help with mitigation.⁵⁹⁷ The Attorney General does have separate authority to enforce state laws, but rarely uses this power.⁵⁹⁸

South Dakota also has a bad actor law that allows the DENR to reject permit applications for persons who have had a permit revoked in another state, who have habitually or intentionally violated environmental laws or caused damage, who lie on a permit, who have been convicted of a felony, or who have been convicted of "moral turpitude."⁵⁹⁹ The waste management board or the secretary of the DENR makes the final decision to reject or allow a permit, but that decision can be appealed through the court system.⁶⁰⁰ The law has not yet been used to deny a permit, but it may have the desired effect just by being on the books because "bad-actors" may be less likely to locate in South Dakota.⁶⁰¹

⁵⁹¹. See *id.*

⁵⁹². See *id.*

⁵⁹³. See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 13 (1996).

⁵⁹⁴. See Lora Duxbury-Berg, *South Dakota: Turmoil on the Prairie*, NAT'L HOG FARMER, May 15, 1997, at 28-34.

⁵⁹⁵. See Telephone Interview with Tim Tollefsrud, Administrator, South Dakota Department of Environment and Natural Resources (July 22, 1997).

⁵⁹⁶. See *id.*

⁵⁹⁷. See *id.*

⁵⁹⁸. See Telephone Interview with Diane Best, Assistant Attorney General, South Dakota Attorney General's Office (July 22, 1997).

⁵⁹⁹. See Lora Duxbury-Berg, *South Dakota: Turmoil on the Prairie*, NAT'L HOG FARMER, May 15, 1997, at 32.

⁶⁰⁰. See Telephone Interview with Diane Best, Assistant Attorney General, South Dakota Attorney General's Office (July 22, 1997).

⁶⁰¹. See *id.*

9. *Oklahoma*

Oklahoma does not have any local control and recently passed strict state laws regulating livestock operations. The State Board of Agriculture was given authority to make all rules necessary to implement the recent Concentrated Animal Feeding Operations Act of 1997.⁶⁰² The State Board must submit any proposed rules for comment to a rule advisory committee at least thirty days prior to Board action or five days prior for any emergency rules.⁶⁰³ The rules advisory committee is comprised of six farmers, an expert in geology, an expert in soil science, and a public representative.

The Oklahoma Department of Agriculture is responsible for issuing licenses and enforcing license requirements.⁶⁰⁴ The Department of Environmental Quality is responsible for environmental regulations of all other agriculture-related businesses.⁶⁰⁵ The United States Environmental Protection Agency is responsible for administering the NPDES permitting program to the exclusion of the two state agencies.⁶⁰⁶

The Department of Agriculture is responsible for investigating complaints about licensed animal feeding operations and must annually make at least one unannounced inspection of each licensed facility.⁶⁰⁷ In the event of a manure discharge, licensed operations are required to immediately notify the Department of Agriculture and provide information about the nature and cause of the discharge, an estimate of the volume of discharge, the time period in which it occurred, steps taken to minimize the damage and prevent future pollution, and test results of the discharged manure and polluted water.⁶⁰⁸

10. *Kansas*

Finally, counties in Kansas have had local control over corporate farming since 1994.⁶⁰⁹ Currently, fifteen counties ban corporate farming, twenty-two permit it, and the other sixty-eight are undecided.⁶¹⁰ The law provides if five percent of the voters in the previous election file a petition in opposition to any county supervisor's vote to allow corporate farming, then the issue must go on the ballot.⁶¹¹ The law is

⁶⁰². See Oklahoma Concentrated Animal Feeding Operations Act, H.B. No. 1522, § 3-4(A), 1997 Okla. Sess. Law. Serv. 1964 (amending OKLA. STAT. tit. 2, §§ 9-203 - 9-204 (1991)).

⁶⁰³. See *id.* § 4(B)-(D) (amending OKLA. STAT. tit. 2, § 9-204 (1991)).

⁶⁰⁴. See *id.* § 13(A)(1).

⁶⁰⁵. See *id.* § 13(B).

⁶⁰⁶. See *id.* § 13 (amending OKLA. STAT. tit. 2, § 9-208 (1996)).

⁶⁰⁷. See *id.* § 12(A) (amending OKLA. STAT. tit. 2, § 9-206 (1991)).

⁶⁰⁸. See *id.* § 9(B)(5) (codified at OKLA. STAT. tit. 2, § 9-205.3).

⁶⁰⁹. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, July 21, 1997, at 15.

⁶¹⁰. See Lon Tonneson et al., *Living with Hogs*, WALLACES FARMER, June 1997, at H3.

⁶¹¹. See KAN. STAT. ANN. § 17-5908(a) (1995).

currently being appealed to the Kansas Supreme Court.⁶¹² Some counties have begun to repeal their ordinances allowing corporate farming, and others are starting to use zoning laws to regulate livestock production.⁶¹³

11. *Michigan*

Michigan's approach to enforcement is somewhat different. The Michigan Department of Agriculture investigates complaints to determine if Generally Accepted Agricultural Management Practices (GAAMPs) have been followed, helps farmers conform to the rules, and makes follow-up inspections.⁶¹⁴ If there is an emergency or if the above procedures are unsuccessful, the Department of Natural Resources steps in and enforces all the environmental laws of the state. The farmer is normally in serious trouble at this point and subject to fines and legal action.⁶¹⁵

12. *Oregon*

Oregon has an interesting way of handling penalties, similar in some ways to North Carolina. Oregon classifies violations as major, moderate, or minor, and sets out corresponding penalties for each class of infraction.⁶¹⁶ Under this system, farmers guilty of minor infractions are not labeled in the same way as those who commit major infractions. Also, the annual permit fee required by the state is \$25, but is increased to \$1000 for the three years after operations have been assessed a civil penalty.⁶¹⁷

C. *Analysis and Options for Iowa*

The most obvious and controversial change Iowa could make would be to allow some local control. Of the eight major pork producing states mentioned above, six of them have some form of local control. Illinois and Iowa do not have local control. The local control could be granted to counties in many different ways, as demonstrated by other states, including control over corporate farming, water quality, siting, enforcement, or total control.

Local control over corporate farming laws is interesting because the environmental issues are separated from the large versus small operator

⁶¹². See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, July 21, 1997, at 15.

⁶¹³. See *id.*

⁶¹⁴. See NATIONAL PORK PRODUCERS COUNCIL & THE NATIONAL PORK BD., A REVIEW OF STATE ENVIRONMENTAL REGULATORY ENFORCEMENT ACTIONS 9 (1996).

⁶¹⁵. See *id.*

⁶¹⁶. See OR. ADMIN. R. 603-74-070 (1995).

⁶¹⁷. See OR. ADMIN. R. 603-74-020 (1995).

controversies. Kansas seems to be the only state taking this approach. Counties and citizens are required to make tough decisions concerning pork production under this approach. It may lead to fewer hogs being raised in Iowa, or it may lead to hog farm expansion by “smaller” producers who may meet less public opposition. Also, the environmental issues and enforcement issues could then be left up to the state.

Local control over water quality also has some positive potential. Counties with particularly sensitive watersheds, such as those with agriculture drainage wells or those with lake recreation areas, could enact ordinances directly related to protecting their water sources. Most of the concerns of the counties that have passed or are considering local ordinances could be addressed under this approach, but giving every county control over regulating livestock operations is risky because every county has “vital” lakes, rivers, and groundwater needing protection. A better approach may be Nebraska’s allowing local drainage districts to request increased protection from the state and then establishing a process whereby the DNR provides extra protection for legitimate concerns raised by counties. The DNR could also designate watersheds in the state that need extra protection and ask the EPC or the Legislature to approve its recommendations. It is important to consider that local control over water quality issues is complicated because rivers and groundwater sources flow across county borders. State regulation is necessary where sources flow across county lines.

Local control over siting has already been discussed in Part IV of this Note.⁶¹⁸ The main benefit is separation of the odor issue from all the other issues of water quality and corporate farming. The negative aspect is that local rules might eliminate all expansion or be used to keep out particular individuals.

Local control over enforcement does not appear to be a good option. Especially problematic are issues of training, resources, and expertise. The state, with all its experts, can more effectively enforce and regulate state laws. Counties should only have control that does not require much enforcement or that cannot be enforced by the state. However, several states do allow counties and state agencies control over enforcement, and it seems to work. Each state must make the decision based on its state and local resources, and state and local expertise. In Iowa the EPC and Attorney General seem to be able to handle violations in a timely fashion so far.

Total local control seems dangerous at this point. States employing this solution generally have a long history of local control and have mechanisms in place to deal with those responsibilities. Granting local control over everything would result in chaos and turmoil for a certain time. In the next few years, North Carolina may experience this phenomenon after its recently enacted moratorium and grant of local control authority. During the chaos, the Iowa pork industry could be adversely effected including further loss of market share. Some persons may advocate continued market share loss, but most people in Iowa want to see the pork industry prosper and significant uncertainty will hamper expansion. Local control may be the

⁶¹⁸. See *supra* Part IV.

best method in the long term, but severe impacts are likely if local control is allowed when the pork industry is undergoing rapid change.

Some of the simple options may be effective in improving the livestock industry in Iowa. First, routine inspections could be required on a sliding scale. Larger operations could be inspected annually and smaller operations could be inspected every two or three years. It would cost money to pay for inspections and any increased enforcement action litigating expenses. The state may also want to change its penalty structure.

D. Conclusion

The enforcement agencies and system currently in place in Iowa seem to be as adequate as any other state's approach and do not appear to need significant change. Tighter enforcement of existing laws and steeper fines for violators may be necessary. Greater enforcement would undoubtedly require paying for more inspectors.

The current balance between state and local control, however, may need changing. Deciding what constitutes an appropriate balance is neither obvious nor an easy choice to make. In the abstract, there are very strong arguments on both sides. The strongest arguments in favor of State control are administrative efficiency and the protection and promotion of commerce with clearer and more stable rules. The strongest arguments for local control are that the people closest to the issue can make the best decisions because they have the most reliable information on local characteristics. Also, because they will have to live with the effects of their decisions, they will make the most responsible choices.

The answer to this question is neither obvious, nor easy. It is clear, though, that the issue of local control must be decided considering other issues surrounding pork production. These factors include: 1) environmental concerns, including water, odor, and the speed with which laws can be changed to protect the land, water, and air; 2) economic concerns, such as the size of the pork industry, the cost of enforcement, and the benefit of stability; 3) and administrative concerns, such as whether there should be duplication, where to find expertise, and how best to use it. Deciding which issues are better handled at the local level and which issues should be addressed at the state level is certainly one of the most important questions that must be answered, first by the Iowa Supreme Court, and ultimately by the Iowa Legislature.

VI. CORPORATE FARMING RESTRICTIONS

A. Introduction

The issue of corporate farming may be the most important force behind the call for increased government intervention into the realm of pork production. It certainly seems more divisive than the issue of environmental protection because almost all

farmers support protecting the environment but disagree with the general public on how to accomplish this and who should pay for it. But the issue of “corporate farming,” whether defined as vertical or horizontal integration, seems to be the crucial issue, even though it is sometimes hidden or clouded by other issues.

Before explaining the corporate law restrictions in Iowa and the rest of the major pork producing states around the country, it may be helpful to clarify a few things. First, a clear distinction should be drawn between vertical integration and horizontal integration. Horizontal integration can be characterized as the trend toward larger farms, in terms of acres and numbers of livestock, within the farming sector, a trend that has been taking place since the advent of machinery and hybrid seed. New technological advances are the main driving force behind most of this horizontal integration and it seems there is not much that can, or should, be done to hinder this process. Horizontal integration has helped United States’ farmers reach unprecedented levels of food production per acre with less human labor and in more environmentally sound ways than any other country in the world. This legitimate progress needs to be encouraged, rather than discouraged, and farmers will be able to decide which new technologies are truly beneficial and worth implementing.

Horizontal integration also includes specialization, which to some extent is the reverse of integration, even though the sizes of the operations do increase. Specialization has occurred with different producer networks and alliances, and new cooperative groups. These developments are also positive because they lead to voluntary efficiencies in pork production by ordinary farmers who normally make those decisions.

The final type of horizontal integration relates to inputs. Feed companies, pharmaceutical companies, and veterinarians, are no longer simply service-oriented as they are more involved with actual decision-making and financing of livestock production. It is vertical integration when feed companies or cooperatives begin to directly control hog production. This may have negative effects. On the other hand, and considering the amount of vertical integration in the pork industry by private companies and processors, the average farmer may need this integration to compete with the larger vertical operations.

Vertical integration generally means controlling the food chain from breeding, farrowing, and finishing, to processing, marketing, and actually selling pork to the consumer. Until recently, hog farmers have controlled the breeding through finishing stages. Other parties have taken care of getting the product to consumers. However, the industry seems to be headed down the poultry industry path. Several larger vertically integrated poultry companies, such as processors and feed companies, control the entire chain. This trend will lead to fewer “independent” producers and the ultimate consequences of this vertical integration depend on how the benefits and costs are measured and compared.

The major benefits of vertical integration seem to be that the pork industry, by placing control into the hands of a few large companies, will be able to compete more efficiently with the poultry industry and other pork producing companies in the world. By consolidating control over pork production, the pork industry will be able

to respond more quickly to new technology, new genetics, and consumer demands for uniform products. If corporations make good decisions, the United States could easily become, or remain, the lowest cost producer of high quality pork in the world. The pork industry would also be on a more level playing field with the poultry industry. The driving forces seem to be consumers desiring a cheap, uniform product, and the processors and marketers of pork products who want to supply pork to the world.

The positive effects of the trend toward vertical integration may come at a heavy price. In order to reach maximum efficiency in any type of business or government, it is necessary to consolidate power and control into the hands of a few people. For example, it would be much more efficient in the short-term to abolish state legislatures and Congress, and just let a governor and the President make all the decisions. This would eliminate salaries, election costs, and delays in decision-making that accompany legislative bodies. But in the long-term, there would be new costs and problems, such as trying to control people with this much power and ensuring that they make responsible decisions (because they would not have to return to their home districts and face their constituents). The marketplace is different from the government in many respects, yet the same concerns may need to be taken into account. In the short term, efficiency is usually good for consumers in the marketplace, because it leads to cheaper products. The long-term effects may not be as good. Once a few companies control the supply of a particular product, they may be able to demand a higher price from consumers for that product, thereby eliminating any short term savings that consumers may have realized.

Consumers will only realize savings if enough competitors or competing products remain to keep the market "honest," or the government steps in and enforces antitrust laws. The price of consolidating power and control within the pork industry may also lead to fewer "middle-class" farmers and supporting businesspersons who have been the economic and social backbone of many rural communities for decades and even centuries.

A third danger with the trend toward corporate control over pork production is that it may lead to more short-term thinking. The structural nature of a corporation inclines it to take more short-term risks and spreads the responsibility and accountability of decisions between shareholders, directors, officers, and employees. When the decisions turn out to be good, all the parties eagerly take credit. When the results are negative over the long term, for instance with environmental pollution, food safety, labor, or the social well-being of the local community, then it becomes easy for the business and the shareholders to move on and leave the remaining community members to pick up the pieces. Another way to put it is that people who have an ownership stake in "property," whether it be their farm, business, or home, are more likely to accept responsibility over the long-term for their property and neighbors' well-being.

States have tried several methods to restrict "corporate" farming. These range from prohibiting corporations and other business organizations from owning agricultural land and from engaging in farming; to prohibiting meat processors from

getting involved with raising hogs; to restricting corporate farming in certain parts of the state. The exceptions to each of the restrictions are very important when assessing the strengths and weaknesses of any corporate restrictions. The exceptions typically include family farm corporations or authorized farm corporations, cooperatives, poultry farming, contracting, breeding stock farms, and custom farming activities.

The exceptions for pre-existing operations show the difficulty in passing new laws. This is because all current operations usually will have to be left alone. Therefore those operations prohibited by new laws, except those that are grandfathered in, may gain a competitive advantage from any restrictions.

The section below outlines some of the state restrictions on corporate farming. It may be very useful to consider the effects of each of these restrictions, if any, on the trends toward vertical or horizontal integration, the ability of the state's pork industry to compete with other states, and the impacts the laws may or may not have on each state's social and economic structure.

B. State-by-State Laws

1. Iowa

The primary law regulating corporate farming is found in Chapter 9H of the Iowa Code, and contains several different restrictions.⁶¹⁹ Iowa law states, "In order to preserve free and private enterprise, prevent monopoly, and protect consumers, it is unlawful for any processor of beef or pork . . . to own, control or operate a feedlot in Iowa in which hogs or cattle are fed for slaughter."⁶²⁰

The first major exception to this prohibition is that certain cooperatives are allowed to contract for the care and feeding of swine with their members, provided the member is actively engaged in farming.⁶²¹ The second exception is that processors are allowed to form contracts for the purchase of hogs and cattle as long as the date of delivery is not more than twenty days after formation of the contract.⁶²² If longer than twenty days, the processor is still allowed to enter into the contract if the delivery date is specifically set to the exact day or a certain month.⁶²³ The farmer can then pick the week for delivery.⁶²⁴ Processors are also allowed to operate animal care and feeding facilities as long as animals are not held for more than ten days, or longer in emergencies, prior to slaughter.⁶²⁵ Finally,

⁶¹⁹. See IOWA CODE § 9H (1997).

⁶²⁰. *Id.* at 9H.2.

⁶²¹. *See id.*

⁶²². *See id.*

⁶²³. *See id.*

⁶²⁴. *See id.*

⁶²⁵. *See id.*

processor activities of a legitimate educational or research nature are also exempt from the restrictions.⁶²⁶ There does not appear to be any restrictions on other types of meat processors, such as poultry.

The second type of limitation is on corporate ownership of agricultural land.⁶²⁷ The first restriction states that a corporation, limited liability company (LLC), or trust cannot acquire or obtain or lease any agricultural land in this state.⁶²⁸ The most important exception, directly related to pork production, is that “family farm corporations, authorized farm corporations, family farm limited liability company, authorized limited liability company, family trust, authorized trust, revocable trust, or testamentary trust” are all exempt.⁶²⁹ A family farm corporation is defined as one where a majority of the voting stock is held by and the majority of the stockholders are related to a certain degree, all stockholders must be natural persons, except for family trusts, and at least sixty percent of the gross revenues over the last three consecutive years are derived from farming.⁶³⁰ The state also has other exceptions, such as encumbrances taken for purposes of security, agricultural land acquired for research purposes not exceeding a total of 640 acres, nonprofit corporations, municipal corporations, Chapter 490 corporations, agricultural land acquired in the collection of debts as part of a contract entered into prior to 1975, agricultural land acquired in a fiduciary capacity, agricultural land acquired to be immediately used for non-farming purposes, and certain grandfather-in corporations and trusts.⁶³¹

The second restriction on agricultural land ownership states that an authorized farm corporation, authorized LLC, or authorized trust after July 1, 1987 and limited partnerships after July 1, 1988, cannot acquire or otherwise obtain or lease agricultural land in excess of 1500 acres.⁶³² However, family farm corporations, family farm limited partnerships, and family farm LLCs are exempt from the 1500 acre limit.⁶³³ Also, agricultural land held, acquired and maintained to protect the state’s natural open space heritage is exempt.⁶³⁴

A further restriction states that a stockholder in an authorized farm corporation, trust, LLC, or limited partnership which owns agricultural land cannot become a stockholder in another corporate structured operation.⁶³⁵ A person can belong to

⁶²⁶. *See id.*

⁶²⁷. *See id.* § 9H.4(2)(c)(1).

⁶²⁸. *See id.*

⁶²⁹. *Id.* § 9H.4.

⁶³⁰. *See id.* § 9H.1(8).

⁶³¹. *See id.* § 9H.4(1)-(11).

⁶³². *See id.* § 9H.5(1).

⁶³³. *See id.*

⁶³⁴. *See id.* § 9H.5(1)(b).

⁶³⁵. *See id.* § 9H.5(2).

only one type of operation as a stockholder, but the restriction does not apply to limited partners in family farm limited partnerships.⁶³⁶

2. *North Carolina*

The state of North Carolina does not appear to have any restrictions on corporate farming.

3. *Minnesota*

Minnesota's basic restriction on corporate farming prohibits corporations, LLCs, pension or investment funds, and limited partnerships from engaging in farming or acquiring any interest in agricultural land.⁶³⁷ Some exceptions to the restrictions include the following:

- 1) Family farm corporations and family farm partnerships are exempt.⁶³⁸ In order to be considered a family, the majority of voting stock must be held by relatives and a majority of the stockholders must be related, at least one of the family members must reside on the farm, and none of the stockholders can be a corporation or partnership.⁶³⁹
- 2) Authorized farm corporations and authorized farm partnerships are exempt.⁶⁴⁰ In order to be "authorized," the corporation or partnership must meet certain requirements. For example, there must be fewer than five shareholders or partners, shareholders or partners holding fifty-one percent or more of the interest in the corporation must reside on the farm or be actively engaged in farming, the corporation must not own more than 1500 acres of land, and shareholders may not have an interest in other authorized corporations if the total amount of land held by the combination exceeds 1500 acres.⁶⁴¹
- 3) Grandfathered corporate structures are exempt, but their acreage expansion is limited to no more than 20% every five years.⁶⁴²
- 4) Agricultural land used for research, security, debt collection if sold within five years, or non-farming purposes is exempt.⁶⁴³

⁶³⁶. *See id.*

⁶³⁷. *See* MINN. STAT. ANN. § 500.24(3) (West 1996).

⁶³⁸. *See id.* § 500.24(3)(b).

⁶³⁹. *See id.* § 500.24(2)(c),(h).

⁶⁴⁰. *See id.* § 500.24(3)(b).

⁶⁴¹. *See id.* § 500.24(2)(d), (i).

⁶⁴². *See id.* § 500.24(3)(c), (f), (n).

⁶⁴³. *See id.* § 500.24(3)(a), (d).

- 5) Corporations or partnerships that raise breeding stock, including embryos, as long as production and sales are reported to the department of agriculture *and* all castrated animals are sold to farming operations *not* owned by the corporation or partnership are exempt.⁶⁴⁴
- 6) Asparagus farms can expand by up to 2700 acres if they owned over 2000 acres of asparagus-farmed land prior to 1973.⁶⁴⁵
- 7) Religious corporations whose sole income is agriculture are exempt.⁶⁴⁶
- 8) Aquatic farms and nursing homes are also exempt from the restrictions.⁶⁴⁷

Minnesota's corporate laws are enforced by the Attorney General, and the Secretary of State collects information from corporations and partnerships to aid in this process.⁶⁴⁸

4. *Illinois*

Illinois does not appear to have any corporate farming restrictions.⁶⁴⁹

5. *Indiana*

Indiana does not appear to have any corporate farming restrictions.

⁶⁴⁴. *See id.* § 500.24(e).

⁶⁴⁵. *See id.* § 500.24(2)(k).

⁶⁴⁶. *See id.* § 500.24(2)(m).

⁶⁴⁷. *See id.* § 500.24(2)(q), (s).

⁶⁴⁸. *See id.* § 500.24(5).

⁶⁴⁹. *See* Telephone Interview with Julie King, Special Counsel to the Director, Illinois Department of Agriculture (July 15, 1997).

6. *Nebraska*

Nebraska's corporate farming restrictions are contained in its constitution at Article XII, section 8.⁶⁵⁰ The constitution states that no corporation or limited partnership, unless the limited partnership meets the definition of a family partnership, can acquire an interest in any title to real estate used for farming or ranching in Nebraska *nor* can it engage in farming or ranching.⁶⁵¹ Ranching includes cultivating land or owning, keeping, or feeding livestock.⁶⁵²

The exceptions to the above restrictions are also explicitly set forth, and are as follows:

- 1) Family farm corporations and family ranch corporations are exempt.⁶⁵³ "Family" is defined as a majority of stock being held by family members, at least one of the family members resides on the farm or is actively engaged in farming, and corporations and partnerships can be stockholders *only if* all stock of that corporation or partnership is owned by family members (majority stockholders) of the original corporation.⁶⁵⁴
- 2) Nonprofit corporations, Indian tribal corporations, and grandfathered corporations are exempt from the restrictions.⁶⁵⁵
- 3) Farming or ownership of land by corporations or partnerships is allowed for research or experimental purposes and the sales are incidental.⁶⁵⁶
- 4) "Agricultural land operated by a corporation for the purpose of raising poultry" is exempt from the restrictions.⁶⁵⁷
- 5) Alfalfa processors producing alfalfa are exempt.⁶⁵⁸
- 6) Agricultural land used to grow seeds, nursery plants, or sod is exempt.⁶⁵⁹
- 7) Custom spraying, fertilizing, or harvesting is allowed.⁶⁶⁰
- 8) Agricultural land acquired for payment of debts or to use for non-farming purposes is exempt as long as it is held for no more than five

⁶⁵⁰. NEB. CONST. art. XII, § 8, cl. 1.

⁶⁵¹. *See id.*

⁶⁵². *See id.*

⁶⁵³. *See* NEB. CONST. art. XII, §8, cl. 1(A).

⁶⁵⁴. *See id.*

⁶⁵⁵. *See* NEB. CONST. art. XII, § 8, cl. 1(B)-(D).

⁶⁵⁶. *See* NEB. CONST. art. XII, § 8, cl. 1(E).

⁶⁵⁷. NEB. CONST. art. XII, § 8, cl. 1(F).

⁶⁵⁸. *See* NEB. CONST. art. XII, § 8, cl. 1(G).

⁶⁵⁹. *See* NEB. CONST. art. XII, § 8, cl. 1(H).

⁶⁶⁰. *See* NEB. CONST. art. XII, § 8, cl. 1(M).

years, during which time the land must be farmed by a qualifying farmer if farmed at all.⁶⁶¹

9) “Livestock futures contracts, livestock purchased for slaughter, and livestock purchased and resold within two weeks” are also exempt from the restrictions.⁶⁶²

The restrictions on corporate farming are monitored by the Secretary of State and enforced by the Attorney General or citizens in district court.⁶⁶³ A family farm corporation that qualified in the past but for some reason fails to qualify later, has fifty years in which to re-qualify provided that majority ownership continues to remain in the family.⁶⁶⁴

The constitutionality of the above restrictions was upheld by the Eighth Circuit Court of Appeals in *MMS Farms Inc. v. Spire* in 1991.⁶⁶⁵ The court decided the restrictions did not violate the equal protection clause of the Fourteenth Amendment because the “kinship” classification system served legitimate and reasonably related government objectives.⁶⁶⁶ Those legitimate governmental objectives recognized by the Eighth Circuit included stemming the problems resulting from land concentration and absentee ownership, limiting the competitive advantage corporations have over family farms in raising capital, promoting family ownership and operation of farms, protecting the rural social and economic structure of the state, and avoiding a decline in stewardship and preservation of land, water, and other natural resources.⁶⁶⁷ It was also important to the court that Nebraska’s restrictions required both kinship and involvement in the day-to-day management or residency on the farm in order to qualify as a farm corporation.⁶⁶⁸

7. *Missouri*

Missouri has restrictions on corporate farming as well. No corporation or cooperative, after 1975, can engage in farming, nor can it acquire an interest in any title to agricultural land.⁶⁶⁹ The exceptions to this restriction include the following:

1) Family farm corporations are exempt.⁶⁷⁰ Half of voting stock must be owned by and half the voting members must be related persons, one

⁶⁶¹. See NEB. CONST. art. XII, § 8, cl. 1(J)-(K).

⁶⁶². NEB. CONST. art. XII, § 8, cl. 1(N).

⁶⁶³. See NEB. CONST. art. XII, § 8, cl. 1.

⁶⁶⁴. See *id.*

⁶⁶⁵. See *MMS Farms, Inc. v. Spire*, 927 F.2d 330 (8th Cir. 1991).

⁶⁶⁶. See J. DAVID AIKEN ET. AL., *A FARMER’S HANDBOOK ON LIVESTOCK REGULATION IN NEBRASKA* 42 (1994).

⁶⁶⁷. See *id.*

⁶⁶⁸. See *id.*

⁶⁶⁹. See MO. ANN. STAT. § 350.015 (West 1991).

family member must reside on the farm or be actively operating the farm, and corporations cannot be stockholders.⁶⁷¹

2) Grandfathered corporations are exempt, but are limited to no more than twenty percent expansion in terms of acres every five years.⁶⁷²

3) Exemptions exist for research purposes,⁶⁷³ non-profits,⁶⁷⁴ security,⁶⁷⁵ debt collection,⁶⁷⁶ distilling purposes,⁶⁷⁷ and non-farm uses of agricultural land.⁶⁷⁸

4) Raising hybrid hogs is exempt.⁶⁷⁹

5) Banks and trust companies acting as administrators or executors of trusts or wills are exempt.⁶⁸⁰

6) There are two exemptions for certain counties in Missouri where the corporate farming restrictions do not apply.⁶⁸¹ One exemption allows swine production north of the Missouri River and west of the Chariton River if the counties have a certain population.⁶⁸² The other exemption allows corporate farms in counties with a township form of government and populated by 3000 to 4000 people that are adjoined by certain sized counties.⁶⁸³ Both exemptions cover the same counties and provide Premium Standard Farms a location for their facilities.

One other interesting aspect of Missouri's corporate laws is that no corporation or cooperative engaged in farming is eligible for any state tax credits, deductions, grants, loans, or other financial assistance unless family farms and family farm corporations are also eligible to receive such benefits.⁶⁸⁴ This prohibition does not apply to agricultural processing or food processing facilities.⁶⁸⁵

⁶⁷⁰. See *id.* § 350.015(2).

⁶⁷¹. See *id.* § 350.010(5).

⁶⁷². See *id.* § 350.015(3).

⁶⁷³. See *id.* § 350.015(4).

⁶⁷⁴. See *id.* § 350.015(7).

⁶⁷⁵. See *id.* § 350.015(1).

⁶⁷⁶. See *id.* § 350.015(9).

⁶⁷⁷. See *id.* § 350.015(5).

⁶⁷⁸. See *id.* § 350.015(8).

⁶⁷⁹. See *id.* § 350.015(10).

⁶⁸⁰. See *id.* § 350.015(11).

⁶⁸¹. See MO. ANN. STAT. § 350.016 (West Supp. 1997).

⁶⁸². See *id.*

⁶⁸³. See *id.*

⁶⁸⁴. See *id.* § 350.040.

⁶⁸⁵. See *id.*

8. *South Dakota*

South Dakota's "Family Farm Act of 1974" prohibits foreign and domestic corporations and LLCs from owning, leasing, holding, or otherwise controlling agricultural land used for farming or capable of being used for farming.⁶⁸⁶ The following activities and structures have been exempted from the law:

- 1) Family farm corporations and authorized farm corporations are exempt from the restrictions.⁶⁸⁷ A majority of stock must be owned by family members, a majority of stockholders must be family members, and a family member must be actively engaged in farming.⁶⁸⁸ In 1988, the law was changed to state that only family farm corporations could own and operate any hog confinement facility used for the breeding, farrowing, and raising of swine.⁶⁸⁹ However, a 1995 opinion by the Attorney General stated that the law only prohibits corporations from involvement in all three swine production phases, but does not prohibit a corporation from being involved in any two of the three phases, thus opening the state to contracting by both corporations and cooperatives.⁶⁹⁰
- 2) Raising breeding stock for resale to farmers, nurseries, seed farms, land acquired for non-farm uses, research farms if incidental sales, gifts to non-profits, greenhouses producing fruit and vegetables, feeding poultry for meat and eggs, debt if sold in ten years, grandfathered operations with allowable increases of twenty percent every five years, and agriculture credit corporations and livestock loan companies are also all exempted from the corporate farming restrictions.⁶⁹¹

The issue of corporate farming restrictions is still a hot topic in South Dakota. A group of citizens, after failing in the 1997 legislature, are attempting by petition to put a referendum on the 1998 ballot that would enact corporate farming restrictions similar to Nebraska's laws into South Dakota's constitution.⁶⁹² The restrictions would revert to the 1988 law prohibiting corporations from pork production

⁶⁸⁶. See S.D. CODIFIED LAWS § 47-9A-3 (Michie 1991).

⁶⁸⁷. See *id.* § 47-9A-13.

⁶⁸⁸. See *id.* §§ 47-9A-14 to -15.

⁶⁸⁹. See *id.* § 47-9A-13.1.

⁶⁹⁰. See Lora Duxbury-Berg, *South Dakota: Turmoil on the Prairie*, NAT'L HOG FARMER, May 15, 1997, at 28, 30.

⁶⁹¹. See S.D. CODIFIED LAWS § 47-9A-3.1 to -12 (Michie 1991).

⁶⁹². See Telephone Interview with Diane Best, Assistant Attorney General, South Dakota Attorney General's Office (July 22, 1997).

contracting, thus overruling the attorney general's opinion, but it would allow cooperatives to contract with farmers.⁶⁹³

9. *Oklahoma*

Oklahoma prohibits foreign corporations from engaging in farming or owning agricultural land, but allows domestic corporations, LLCs, and trusts to engage in those activities if they meet certain requirements.⁶⁹⁴ The two chief requirements are that thirty-five percent of the receipts must come from farming and ranching or mineral extraction, and there can be no more than ten shareholders unless they are related.⁶⁹⁵

The restrictions do not apply to certain activities and organizations, including the following:

- 1) Corporations engaging in swine or poultry operations and related operations such as hatcheries, feed mills, and technical assistance.⁶⁹⁶
- 2) Livestock or poultry breeding stock operations.⁶⁹⁷
- 3) Research, forestry, charitable purposes, and fluid milk processors, but activities are limited to the processor's needs.⁶⁹⁸

10. *Kansas*

Kansas prohibits corporations, trusts, LLCs, limited partnerships, and corporate partnerships from directly or indirectly owning, acquiring, leasing, or otherwise obtaining any agricultural land in the state.⁶⁹⁹ The exceptions to these restrictions are as follows:

- 1) Family farm corporations, authorized farm corporations, limited liability agricultural companies, limited agricultural partnerships, family trusts, authorized trusts, and testamentary trusts are exempt.⁷⁰⁰
- 2) Municipal corporations, non-profit corporations (if a gift), land held in a fiduciary capacity by trust companies or banks, non-farming activities, religious organizations (if a gift), security, and

⁶⁹³. *See id.*

⁶⁹⁴. *See* OKLA. STAT. ANN. tit. 18, § 951(A) (West 1997).

⁶⁹⁵. *See id.* § 951(A)(2), (3).

⁶⁹⁶. *See id.* § 954(3).

⁶⁹⁷. *See id.* § 954(2).

⁶⁹⁸. *See id.* § 954(1), (4), (5), (6).

⁶⁹⁹. *See* KAN. STAT. ANN. § 17-5904(a) (1996).

⁷⁰⁰. *See id.* §§ 17-5904(a), 5903 (defining each term).

grandfathered operations with no allowable expansion are all exempt.⁷⁰¹

3) Agricultural land is exempt from the corporate farming restrictions if owned or used by corporations for a feedlot, poultry confinement facility, rabbit confinement facility, timber, forestry, nursery products, sod, educational or research purposes, alfalfa growing by alfalfa processors, or coal mining activities.⁷⁰²

4) Agricultural land is exempt if owned or leased by a corporation or LLC for use as a swine production facility and a county has voted to allow such use according to procedures established in K.S.A. 17-5908.⁷⁰³

5) Agricultural land owned or leased by a corporation or LLC for use as a dairy production facility is exempt from the state's corporate farming laws if a county has voted to allow such use according to procedures established in K.S.A. 17-5907.⁷⁰⁴

6) Production contracts by corporations, LLCs, among others, are allowed and do not constitute ownership or control of agricultural land.⁷⁰⁵

As the above summary of Kansas's corporate laws shows, counties have some local control over the corporate farming laws related to pork production. Basically, the state prohibits certain types of corporate hog farming and dairy farming unless counties explicitly choose to allow it. The procedure for counties to approve corporate hog farming within their borders is as follows:

1) The board of county commissioners must initially approve permitting swine production facilities to be operated and owned by corporations or LLCs.⁷⁰⁶ The resolution must be published once per week for two weeks in the official county newspaper.⁷⁰⁷ The resolution takes effect sixty days after the second publication unless a valid petition is presented in opposition before that time.⁷⁰⁸

2) A valid protest petition must be signed by at least five percent of the voters who voted for the office of secretary of state in the preceding

⁷⁰¹. See *id.* § 17-5904(a)(1), (2), (4), (5), (6), (7).

⁷⁰². See *id.* § 17-5904(a)(8), (9), (10), (11), (13).

⁷⁰³. See *id.* § 17-5904(a)(15).

⁷⁰⁴. See *id.* § 17-5904(a)(16).

⁷⁰⁵. See *id.* § 17-5904(a)(16)(b).

⁷⁰⁶. See *id.* § 17-5908(a)(1).

⁷⁰⁷. See *id.*

⁷⁰⁸. See *id.*

general election.⁷⁰⁹ If the requirements are met, then the issue must be voted on in the next state or county-wide general or special election.⁷¹⁰

Counties in Kansas have had local control over corporate farming since 1994.⁷¹¹ Currently, fifteen counties ban corporate farming, twenty-two permit it, and the other sixty-eight have not spoken.⁷¹² The law is being appealed to the Kansas Supreme Court.⁷¹³ Some counties have begun to repeal their ordinances allowing corporate farming, while others are starting to use zoning laws to regulate livestock production.⁷¹⁴

C. Analysis and Options for Iowa

States have tried several methods to restrict “corporate” farming, ranging from prohibiting corporations and other business organizations from owning agricultural land or engaging in farming, to prohibiting meat processors from raising hogs, to restricting corporate farming to certain parts of the state. When assessing the strengths and weaknesses of any restriction, it is very important to consider their exceptions. Exceptions for pre-existing operations illustrate one problem with new legislation in that current operations will usually have to be grandfathered. Those grandfathered operations gain a competitive advantage because they are protected from the new restrictions.

Iowa may take several routes. Iowa could do nothing, it could lift all restrictions, or it could strengthen its restrictions, for instance by adding restrictions based on the farming activity rather than just land ownership, or by putting current restrictions into the state constitution, as in Nebraska. A type of “corporate” farming, once permitted, normally has constitutional protection against being taken or regulated out of business, limiting the opportunity to reconsider. That consideration does not necessarily preclude changes, but it is an important issue to remember. Another important factor to consider is that Iowa is the leading pork producer in the nation. This means that other states may follow whatever direction Iowa takes.

Finally, it may be important to remember the policy justifications behind the original passing of the corporate restrictions in order to decide whether those justifications are valid in today’s pork industry. Some of the policy justifications, in states that have restrictions, have included avoiding absentee ownership and land concentration, limiting the advantage that corporations have in raising capital,

⁷⁰⁹. See *id.* § 17-5908(a)(2).

⁷¹⁰. See *id.*

⁷¹¹. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, July 21, 1997, at 15.

⁷¹². Lon Tonneson et.al., *Living With Hogs*, WALLACES FARMER, June 1997, at H3.

⁷¹³. See Steve Marbery, *Hog Industry Insider*, FEEDSTUFFS, July 21, 1997, at 15.

⁷¹⁴. See *id.*

promoting family ownership and control, ensuring land and water stewardship, and promoting the rural social and economic structure of the state. One effective method of promoting these policies seems to be to retain or create a strict separation between the production side and the corporate processing side of the hog industry. In addition, the methods shown in other states could also be adopted in Iowa to promote policies mentioned above in more effective ways.

D. Conclusion

Vertical and horizontal integration within the pork industry, even though highly controversial and complicated, should nevertheless be directly addressed by each state. Ignoring the issue may lead to excessive environmental regulations and permitting requirements (hurting all pork producers), unnecessary litigation, misguided resistance towards existing farmers trying to expand or network (for instance, the moratorium on all new expansion in North Carolina), and instability within the pork industry. These effects may prevent expansion when the market demands it, fewer young farmers may enter the industry, or market share may be lost to other states or countries. However politically unpopular the issue may be, ignoring the issue has led to problems by pitting neighbor versus neighbor and urban interests versus rural interests. Addressing the issue head-on may be a better solution in the long run. The routes taken by states in the next few years will have lasting ramifications on the structure of its pork industry and rural communities. Therefore, any proposal should be carefully evaluated and critiqued before any changes are made

VII. CONCLUSION

It is clear the United States pork industry at the *production* level is currently in a state of transition, some say chaos, as it changes from an industry that was virtually unregulated for hundreds of years to one that is potentially a heavily regulated industry. Because most states have passed laws and regulations to deal with current or perceived problems, this Note has focused on “regulatory” ideas and options. This is unfortunate in many respects, because most farmers raising hogs do not need any governmental oversight. They do things the right way because it is the right thing to do. Many methods effectively encourage proper behavior or deter improper behavior. Sources include personal respect for the land and a sense of stewardship for the land and other natural resources in which many farmers take pride, community pressures to care for the land and be a “good” neighbor, hopes that a farm will be passed on to a younger generation, and awareness of economic realities, for instance knowing that destruction of the natural resources will affect your business profits and that wasting manure is simply pouring money down the drain.

Of course there are those who do not act responsibly and who cannot be deterred by anything other than laws and corresponding penalties. This is an important reason for regulatory action by either local or state governments.

Therefore, lawmakers should take care in targeting any necessary regulations to those who really need to be regulated. This is not an easy task, but must be attempted. Certainly, it is necessary for some punitive and reactive laws in order to target “bad actors,” but it would seem useful to search for more proactive, less confrontational, and less regulatory solutions to some of the potential problems caused or faced by the pork industry. It may be helpful to look at the state of Michigan as an example.

A few years ago, the major agricultural groups in Michigan, including processors, the pork producers association, and other farm groups, as well as the state government and Michigan State University, formed the Michigan Pork Alliance.⁷¹⁵ The purpose of the alliance was to bring all interested parties to the table. Because of the small number of processors and producers in Michigan, the task was not too difficult. Larger pork producing states like Iowa would have more difficulty in establishing a strong structure to deal with problems faced by the industry.⁷¹⁶ The Michigan group initially focused on how to expand the state’s annual pork production by one million hogs. To do this, they developed two programs.⁷¹⁷ First, a producer video contained facts and figures on hog production and new technological advancements in pork production, including the ability of independent producers to adopt new production methods, if necessary in order to compete in the “new” pork industry.⁷¹⁸ The alliance also facilitated networking among their producers.⁷¹⁹ In the second major project a capital fund was established to ensure that every producer with a good record could find the capital needed to expand.⁷²⁰ The Michigan Livestock Exchange Investment Corporation was set up with funds donated by the participants in the Alliance. The Corporation received a \$3 million grant from one of the state processors and currently has a \$23 million loan portfolio mainly in hog facilities.⁷²¹ Other lenders in the state also became more receptive to making loans to hog farmers as a result of the positive publicity.⁷²² The alliance has a minimum of governmental involvement and funding, as the only major governmental expense is the salary of the alliance coordinator.⁷²³ Expansion has occurred with minimal public resistance.⁷²⁴

The alliance developed in Michigan is one example of a proactive, positive approach taken to deal with issues confronting the pork industry. This approach may

⁷¹⁵. See Telephone Interview with Sam Hines, Executive Vice President of the Michigan Pork Producers Association (July 17, 1997).

⁷¹⁶. See *id.*

⁷¹⁷. See *id.*

⁷¹⁸. See *id.*

⁷¹⁹. See *id.*

⁷²⁰. See *id.*

⁷²¹. See Dean Peterson, *Michigan Pork Alliance*, MICHIGAN FARMER, Mar. 1996, at 8-9.

⁷²². See *id.*

⁷²³. See Telephone Interview with Sam Hines, Executive Vice President of the Michigan Pork Producers Association (July 17, 1997).

⁷²⁴. See *id.*

not work in every state, but there are bound to be many potential creative approaches to managing the changing pork industry other than focusing on governmental regulations. Iowa farmers have met challenges in the past and there is no reason to believe they will not continue to do so, given enough time. Substantial expansion is already quietly taking place in Iowa in response to the high hog prices.⁷²⁵ Iowa producers had several obstacles to overcome before responding to the market, such as finding adequate financing, getting over the fear of high corn prices and low hog prices of recent years, getting over the fear of environmental opposition, and deciding to make the long-term commitment to stay in the hog industry for several more years.⁷²⁶

The choice is not, and should not be, between either allowing all types of large corporate farms or trying to push out or reduce the hog industry in Iowa. Rather, the important issue is how to keep a thriving and expanding hog industry in the state through the existing rural framework of family farms (large and small) and farmers. It seems premature for the state and its leaders to give up on the traditional independent pork producers and all the benefits they bring to the state.

The key for legislative and industry leaders is to find the right mix of laws and private action that will allow the hog market to function freely and effectively, with enough governmental oversight to make sure that bad actors are kept in check and to make the public feel confident that farmers who are producing pork are doing so in responsible and environmentally sound manners.

⁷²⁵. See Kevin Blind, *Low-Key Expansion Sweeps Countryside*, IOWA PORK TODAY, Aug. 1997, at 10.

⁷²⁶. See Bill Helming, *Why Hog Numbers Are Not Expanding More Rapidly*, IOWA PORK TODAY, June 1997, at 13.