

## **Policy Alternatives**

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The growth of livestock confinement feeding operations, particularly hogs, appears to have generated two distinct concerns among Iowans(1) concerns about the structure of the livestock feeding subsector including sources and types of capital, location of management and commitment to the local community, market access, extent of vertical integration involved and linkages to meat packers; and (2) concerns about environmental costs and externalities including possible stream pollution, groundwater pollution, offensive odors and the resulting impacts on use and value of neighboring property.

### **The Structure Issue**

Decisions on farm structure, particularly as it relates to livestock feeding operations, are not solely determined by public policy or by individual producers. Changes being made by industry in the private sector food system beyond the farm gate are also driving much of the change in farm level structure decisions. These include new emphasis on consumer driven markets and growth in value added products that require specialized inputs, which leads to contracts and interdependence.

Whether the industrialization of agriculture will completely supplant the traditional family farm/open market structure remains in question. While public policy can influence the changes in farm structure, changes in the food system are likely to continue to drive many of the factors which shape farm structure in the future.

Questions relating to the structure of livestock feeding in terms of management, control, sources of capital and market access and integration are generally perceived in a setting of large facilities in competition with smaller, family-type operations. It should be recognized that the competitive effect of a particular operation is essentially the same whether located in the same section or across the country. If the product involved is sold into a national or international market, the competitive impact is similar wherever located.

This suggests there are practical limits on the extent to which one state, acting alone, can deliberately influence the structure of the subsector. Long term a state can impose additional costs, direct or indirect, on a firm only to the extent that the state enjoys an overall competitive advantage over production in other states. Costs imposed beyond that point would be expected to cause new investment to be made elsewhere. Alternatively, states may focus on strategies that assure broad access by industry participants to tax incentives and low cost factors of production critical to the industry as a form of support for preferred farm structures. However, these alternative strategies are only effective to the degree that these incentives are greater than the competitive advantage enjoyed by farms with the structural characteristics that are not preferred. The cost of such strategies depends on whether the competitive advantage increases or decreases over time.

The focus in this section of the chapter is on ways a state can act to influence the structure of farming or feeding operations if it makes the political decision to do so. However, a note of caution is advised. One recent study shows why it is difficult to generalize about the causal impacts of state policy on the pork industry. During the past few years, increasing production has occurred along with increasing concentration of hog production in Arkansas, California, Michigan, Minnesota, Missouri, North Carolina, Oklahoma and Pennsylvania.

Decreasing production has occurred along with increasing concentration in Alabama, Georgia, Iowa, Kansas, Kentucky and Tennessee. Production has remained flat while concentration has increased in Illinois, Indiana and Wisconsin. In contrast to what people may believe, concentration has declined in two states Nebraska and South Carolina. However, these states have experienced decreasing production as well. As a result, there is little explanation for the growth or decline in the pork industry by region. In addition, Minnesota is an example of a state that has local control over siting and it is among the states with a growing hog industry.

In Iowa, attempts to affect the structure of farming and livestock feeding in recent years have focused on imposing limitations on the defined legal choices for (1) owning agricultural land, (2) carrying on farming and feeding operations, and (3) creation of new generation cooperatives.

### **Land ownership limitations.**

Iowa currently imposes a moratorium on acquisition of agricultural land by corporations other than *family farm corporations, authorized corporations, family trusts, authorized trusts, and testamentary trusts*. Iowa also excludes nonresident aliens, foreign businesses, and foreign governments from land ownership for agricultural purposes.

Family farm corporations have no restrictions in land ownership. To qualify as a family farm corporation, the corporation must be founded for the purpose of farming and the ownership of agricultural land, a majority of the voting stock and a majority of the shareholders must be related, the shareholders must be natural persons or persons acting in a fiduciary capacity for the benefit of natural persons, and 60 percent of the gross revenues of the corporation over the last three-year period must come from farming.

Authorized corporations can own a limited amount of farmland. An authorized corporation is a corporation other than a family farm corporation that is (1) founded for the purpose of farming and the ownership of agricultural land, (2) the number of shareholders does not exceed 25, and (3) the shareholders are all natural persons or persons acting in a fiduciary capacity for the benefit of natural persons or nonprofit corporations.

Beginning in 1987, authorized farm corporations and authorized trusts could no longer acquire or lease agricultural land if the total exceeded 1,500 acres. In 1988 the same limitation was extended to limited partnerships, other than family farm limited partnerships and limits were imposed so that an individual could not become a shareholder, or beneficiary of more than one authorized corporation, authorized trust, or limited partnership. In 1993, these limitations were extended to limited liability companies. In 1996, new generation cooperatives were authorized and allowed to own up to 640 acres of land. Traditional cooperatives are in most circumstances not allowed to own or lease land for agricultural production, including land on which poultry or livestock production takes place.

### **Livestock feeding and ownership limitations.**

In Iowa, it is unlawful for any processor of beef or pork (or limited partnership in which a processor holds partnership shares as a general partner) to own, control or operate a feedlot in Iowa in which hogs or cattle are fed for slaughter. However, this limitation does not apply to cooperative processors in the same manner as other processors. Generally, local cooperative associations may contract with farmer members for the care and feeding of swine even though the local cooperative association may be a member of another regional cooperative processor. Iowa's limits do not apply to contracts for

delivery or sale of livestock. Iowa law does require contract feeders and processors to file certain reports with the Secretary of State.

Iowa law does not prohibit packers from owning or controlling captive supplies of livestock produced in other states. Nor does Iowa law prevent price premiums for larger volume producers.

### **New generation cooperatives.**

In 1996, Iowa created a new form of cooperative to enhance the development of value added agriculture, including livestock feeding. A new generation cooperative may be formed by as few as three farmers, who are defined as natural persons who regularly participate in the physical labor or operations management in a farming operation and who file a schedule F for tax purposes. However, up to 25 percent of the equity and control of the new generation cooperative may be held by entities other than farmers, crop-share landlords and employees, such as, corporations, cooperatives, and limited liability companies. The number of shares may be limited, one person/one vote rules apply and each share may have variable delivery rights. Each share and delivery right is transferable and may be sold. Farmers may participate in any number of these coops without exceeding the authorized farm entity limit. However, if a shareholder owns more than 15 percent of the equity in one of these coops, that shareholder cannot participate in another. In addition, USDA provides loan guarantees to farmers who invest in new value added cooperatives. As a result, several new generation cooperatives are being formed around livestock feeding ventures.

Two key questions regarding policy impact are whether the Iowa limitations have been effective in influencing industry structure and whether the restrictions place the state at a competitive disadvantage. On one hand, Iowa policy limits land ownership and livestock production by certain entities that may have the potential to (1) create large livestock confinement operations and (2) create certain competitive advantages from market integration that are defined to be

On the other hand, Iowa policy does not constrain, but encourages family farm corporations, sole proprietorships, and new generation cooperatives in creating livestock production units, unrestricted by size. As a result, the implications for size of operations in Iowa are unclear. It can be said with some confidence that attempting to influence the structure of farming and livestock feeding operations by limiting choice of organizational structure will likely require continuing legislative attention as new and innovative approaches to organizing farm businesses and coordinating them with other segments of the food system are developed.

Although rarely used, and not employed in Iowa to any great extent, another policy alternative for influencing structure would be to affect the cost curve for certain operations, perhaps those above a specified size or scale. In Iowa, this discussion has typically centered around (1) use of property tax increment financing incentives for large operations and (2) granting of property tax preferences for family farm operators and agricultural buildings up to a specified amount.

Cost curves could be raised for larger, more efficient firms to remove any perceived cost advantages by imposing a tax on facilities, use of inputs or outputs produced. Long-term, if done uniformly over the entire market, the result would be higher costs of the end products to consumers or lower profits or both. Justifications for such action may either include recovery of public costs associated with externalities of larger operations or structural preferences of the public.

Another approach would be to impose additional requirements on firms above a specified size or scale, perhaps relating to waste handling and disposal, which would impact the cost curve of firms. The result

would be similar to a tax. It should be noted that, in both instances, the effect could be a competitive disadvantage for a state levying a tax or imposing additional requirements unless the measures were imposed uniformly over the production area comprising the market for the product.

Nine states in the Midwest and Upper Midwest (North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Missouri, Iowa Minnesota and Wisconsin) have adopted legislation imposing limitations of various types on farming operations.

A contrasting policy response is to provide a subsidy for smaller producers to assist in defraying costs of environmental compliance as is now available under the Environmental Quality Incentive Program (EQIP) authorized by the 1996 farm bill. Half of the funds allocated under the EQIP program must be directed to environmental problems of livestock production. Large operations with greater than 1000 animal units are not eligible for cost sharing under the program. Alternatively, providing subsidies to institutions that provide small farmers with access to critical factors of production, capital or markets represents an indirect response to achieving a similar end.

### **The Environmental Issue**

Environmental concerns relating to stream, groundwater and air pollution are examples of cost externalities. Not all of the costs of waste disposal are borne by the producing firm and are, therefore, not taken into account by the firm in its decision making. This results in market failure or inability of the market to reflect the full range of costs generated by the operation. Much of environmental policy over the past 50 years has involved efforts to reduce cost externalities or to require firms to take into account such cost externalities.

Cost externalities are as old as recorded history and have involved not only odors, but also noise, dust, congestion, risk of explosion, socially inappropriate (for the community) facilities and other offensive conditions. In the course of history, societies have generally progressed through various stages or “generations” of response.

#### **1. Lawsuit by those offended.**

The oldest response of legal systems was to allow those offended by cost externalities to bring a lawsuit *if the offensive condition interfered substantially with the use that others were making of their property*. Lawsuits often involved a theory of nuisance but sometimes involved charges of negligent operation of instrumentalities or facilities. Occasionally, lawsuits were pursued on a theory of trespass as offensive fumes or smoke would migrate across adjacent or nearby properties.

#### **2. A regulatory response.**

Beginning in the mid-20th Century, the focus shifted. The new approach was to enact legislation imposing limits or standards setting maximum levels of discharge of some pollutants and prohibiting the discharge of other, more damaging, pollutants.

In general, Iowa and the United States continue to rely on a regulatory approach in dealing with groundwater and stream pollution. Therefore, the major concerns relate to design adequacy, the probability of system failure and the consequences of such failure. Since the economic and sociologic consequences of system failure are generally greater for larger operations, the policy-making arena may choose to impose more demanding requirements on larger facilities.

### **3. Economic incentives.**

Beginning in the late 1980s and continuing into the 1990s, the policy response shifted perceptibly to embracing economic incentives and, to the extent possible, applying the discipline of the market to environmental decision making. With this approach, the emphasis has been on the costs linked to measures to deal with or neutralize cost externalities and the benefits expected to be derived from the policy action.

As an example, the Clean Air Act of 1990 established a framework for a market to be developed in rights to emit specified substances into the atmosphere. At the same time, federal farm policy has been in a transition from commodity support programs to incentive payment for conservation and environmental protection practices. It has been generally believed that an economic incentives approach is more compatible with an objective of maximizing economic growth for the country. Incentives for preferred behavior represent an alternative approach. But this approach requires an appropriate source of revenue for funding.

Policy responses developed to deal with cost externalities are heavily dependent upon the perspective adopted in the jurisdiction:

#### **1. A “property rights” perspective.**

One possible perspective is to approach cost externalities in a setting in which decisions are made on the basis of the property rights of the parties. This has been the traditional perspective of policy makers in this country and is related to the constitutional assurance that property rights will not be taken from private property owners without due process of law.

#### **2. A “who was there first” perspective.**

Beginning in the 1970s, states began adopting laws which took a contrasting perspective. These statutes were based in part upon the concept that an agricultural operation that was there first was entitled to a modicum of protection. Other legislation, including H.F. 519 in Iowa, provided protection even though the agricultural operation was not there first.

test on what are acceptable levels of odors or other cost externalities.

#### **3. Level of externalities nearby owners/residents are expected to endure.**

Another important component of the group of alternative perspectives guiding policy making is the level of externalities which nearby or adjacent owners or residents are expected to endure. The property rights perspective has never required zero externalities although some have argued for zero externalities as the “base” condition in constructing policy responses. For years, local zoning procedures have been implemented in many states to reduce the problems that can occur when incompatible uses are sited adjacent to each other. However, agriculture is currently exempt from these statutes in Iowa. In general, adjacent or nearby owners and residents have been expected to endure levels of externalities short of “substantial interference” with the use made of their property. From a quantitative point of view, it is

### **Policy Options for Managing Odor**

For centuries, problems related to offensive odors were handled principally by applying the law of nuisance. Beginning with enactment of agricultural zoning exemptions several decades ago, the “agricultural area” legislation and continuing with passage of H.F. 519 in 1995, the State of Iowa

moved away from the concepts of local planning for incompatible agricultural use and nuisance. Instead, Iowa moved toward exempting agriculture from local planning processes and providing immunity from suit for those carrying on livestock feeding operations in the state.

The level of political resistance to that approach has increasingly demonstrated that insulating owners and operators of livestock confinement facilities from legal accountability for odors has not met with universal public support. So this may be a good time to consider alternative ways of dealing with problems of livestock odors.

One place to begin discussion of the issue is by identifying the necessary elements of a policy framework. If agreement can be reached on the basic elements of a policy framework, the configuration of the system itself becomes a matter of dialogue among competing interests.

- The first feature of a system of policy response to odors is to reach agreement on the allocation of rights as among the parties involved. The problem of offensive odor has historically been treated as a property rights issue. Indeed, that orientation has such a strong tradition that firm expectations are held by property owners that offensive conditions will not be allowed to interfere with one property. Without question, offensive odors impinge upon the property rights of the owners of adjacent and nearby tracts of land. At the same time, owners and operators of livestock confinement facilities can make the case that among their property rights is the right to carry on economic activities that are not considered illegal in the jurisdiction.

If livestock facilities did not create odors suffered by those external to the tract on which the facility is located, the respective bundles of rights would not be in conflict. But the fact is that confinement livestock facilities do create cost and environmental externalities during at least certain periods during the year.

- The second necessary element for a policy framework is to decide whether the approach used will or will not encourage those creating odors to adopt and use odor-controlling technology. Moreover, will the system employed provide economic encouragement for developing more effective technologies for odor control?
- The third necessary element is to decide whether or not those creating odors will be encouraged to locate facilities in a manner to minimize odor problems to neighbors. This may result in constructing facilities away from boundaries or in relocating those impacted by odor.
- The fourth necessary element is to decide whether or not those creating odors should be encouraged to utilize good management practices to minimize odors.
- The fifth element is to decide who should pay for the costs of monitoring, spill damages, costs for clean up, and whether or not those who build, operate and potentially profit from livestock confinements will provide partial or full financial assurance that sites will be appropriately cleaned up when the useful life of the facility and its manure management improvements end. Some of the alternatives include incentives for individual confinement operators to pay their own costs. Industry-wide assessments have been imposed to assure partial clean up. Finally, local county taxpayers and/or state taxpayers might cover the remainder of the costs. Part of the policy decision may depend on the degree which economic development of the industry is viewed as part of the public interest versus producer responsibility.

### **Possible Solutions**

One solution could be to return to reliance on the law of nuisance to settle disputes. That approach is costly to the parties and does not necessarily produce predictable results. There is often considerable

uncertainty as to the outcome. Predictability is possible only in extreme instances of interference with the rights of others. However, this approach could be coupled with Iowa which provide nuisance suit protection for livestock operations within the district, if granted by county supervisors after a local hearing process. This approach represents a slower process that separates urban development from agricultural development areas over time.

Another solution would be to establish a relative to the level of odors crossing boundaries. That would lead to

sufficient land around a facility to reduce the level of odors at the periphery to acceptably low levels. So long as odors do not create public health problems, there seems to be little reason to prevent a rental market from developing in land subject to significant levels of odors. The rental would be expected to be at reduced rates to reflect the presence of odors at least to the extent residences are involved. Some modest reduction of rental rates might occur where the only activity is cropping operations because of the offensiveness to those carrying on farming operations. A major drawback of this approach is the investment needed in the land. In order to assure at least one mile of distance from the confinement facility in all directions, it would be necessary to control at least parts of five sections of land. Again, it would encourage the construction of facilities near the center of controlled tracts rather than along roads or highways.

A third solution would be to require all permit applicants to submit easements over adjacent and nearby tracts of land (perhaps a mile in all directions) which would be negotiated with the owners (and tenants). This would likely involve negotiated compensation to the owners (and tenants) as an annual cost of doing business. There are two possibilities for such an approach.

One possibility would be for an annually renegotiated compensation amount. The livestock facility owner, once capital is committed, would be vulnerable to escalating demands for compensation. The other approach would be to contemplate a one-time negotiation with annual payments to be made. The adjacent owners and tenants would be vulnerable because of the possibility of escalating levels of odors from the facility either because of increased numbers or relaxed management of odor control.

If the level and intensity of odors could be measured objectively, either system would work satisfactorily. Without a reliable system of odor measurement, the better approach would probably be annual renegotiation but with the burden on the adjacent or nearby owner to prove increased levels of odors if the number of animals, odor control technology and management practices had not changed. In any event, it would be helpful to have a provision for arbitration panels in the event the parties could not reach agreement in the annual negotiations.

Something at their expense. Paying compensation encourages adoption of appropriate technologies and use of good management practices, it creates a strong economic incentive to develop new technologies, and it encourages facility owners to use cost minimization in siting facilities. Paying compensation has several benefits. Compensation may ease the objections of those suffering significant levels of odors who feel they have something and the livestock confinement facility has

technologies and use of good management practices, it creates a strong economic incentive to develop new technologies, and it encourages facility owners to use cost minimization in siting facilities.

The major drawback to this approach is the uncertainty surrounding the annual negotiating sessions and, for the livestock producer, the annual cost of the payments. Such costs could outweigh any competitive advantage that a specific site or location might offer.

A fourth solution would be to impose a charge or tax on those generating odors which would be used to compensate those suffering ill effects from the condition. The economic effect would be similar to

negotiated compensation under an easement approach. A major problem is in establishing the level of tax appropriate for the consequences generated by odor creation.

The fifth option is to continue current policy where the rights of livestock enterprise developers supersede the rights of neighbors who may be affected by odor and other spillovers. This approach will likely result in continuing conflicts in cases where minimal standards and enforcement are considered to be insufficient by neighbors.

There is no solution that is costless to everyone and acceptable to all parties involved unless odors can be completely controlled for zero costs. Until and unless that level of odor control is achieved, some system will be needed. Whatever system is employed, the owners of livestock confinement facilities may be asked to bear a portion of the economic costs of utilizing the air space above adjacent or nearby tracts.

Additional costs can be expected to encourage investors to locate livestock confinement facilities outside the state unless other states or the federal government take similar steps, or the cost advantage of locating a facility in Iowa is equal to or greater than the additional costs of compliance with odor control measures.

### **Level of Decision Making**

The final issue in the area of policy alternatives is the matter of whether policy options should be developed and imposed, or at least influenced, at local, area, state, regional, national, or international levels.

The focus should be on making decisions at a level that would assure the internalization of all significant cost externalities. In the interest of responsiveness in decision making, it is usually advisable to make decisions at the lower level that would assure such internalization of significant cost externalities.

To the degree that technology may not solve all of the externalities related to siting, odor and enforcement, there are a variety of ways to bridge the gaps among federal, state and local policy objectives on large livestock confinements. Here are six options drawn from Iowa and examples from other states

#### **Option 1. Allow More Local Authority.**

Presently, a question exists in Iowa as to whether state policy preempts all local authority over agriculture and environmental protection regarding livestock confinements. A District Court decision on the Humboldt County ordinances upheld local authority to require permits, monitor wells and financial assurance on the basis of local authority to protect public health and safety. The State Supreme Court may uphold or over-rule the county ordinances. Contributing factors in the Humboldt County District Court case included the large number of drainage wells in the area and limited assurance to counties provided by the present state indemnity fund.

The odds for all Iowa counties adopting the same ordinance are very small. Several Iowa counties have already rejected or postponed consideration of similar ordinances until the outcome of the Humboldt ordinance is clearer. But, while some counties may attempt to restrict large livestock confinements due to local circumstances and characteristics, other counties are likely to welcome them. Local option processes have not shut off expansion of the industry in Kansas and Minnesota but they have imposed local policy preferences on the industry's development. The largest impacts of the local control option are most likely to be felt by two groups

confinement units, but who are unable to provide financial assurance or are unwilling to move operations to other counties, and producers who view the local policy environment to be too unstable for making major investments in local confinement projects.

Alternatively, Iowa could remove the agricultural exemption from local zoning for larger scale livestock operations. An argument could be made that if nuisance suit protection is afforded to all livestock producers, then perhaps local zoning procedures and public input might avoid incompatible uses and their negative consequences before siting occurs, as is the case with industrial, commercial and residential property.

### **Option 2. Re-assert State Preemption over Local Input.**

Some will prefer that state policy makers re-assert and broaden state preemptions. Those negatively impacted include people who believe that state policy does not provide enough flexibility to meet local circumstances or that state enforcement is inadequate. Perhaps requiring monitoring wells, increasing enforcement capacity, increasing state indemnity fund coverage to include county financial exposure, and partial removal of nuisance suit protection would provide greater incentive for spillover mitigation and prevention. The state preemption approach re-establishes one set of rules across the state with one agency in charge of enforcement under state control.

### **Option 3. Develop a Two-Tiered System of Shared Responsibility.**

This model is used by the State of Oregon for land use planning. Under this model, state policy makers develop and pass state authorizing legislation that specifies the statewide policy goals and recommended policy parameters for implementation. Such parameters might include separation distances, county land use planning parameters, siting criteria, manure application limits, and environmental protection enforcement plans.

The state would then grant authority to local governments for developing a local livestock confinement policy and implementation plans that carry out the state objectives. Local governments would either adopt or modify the recommended state policy parameters. If modifications were adopted locally, justification and evidence for the local policy modifications would be presented to a statewide commission before they could be implemented.

The statewide commission, which Iowa already has, would have expanded authority to approve, modify or reject local implementation plans based on whether the local plan continued to meet state objectives.

### **Option 4. Divide Authorities into Areas of Specialization.**

To adopt this approach, state policy makers would divide the various responsibilities and specify or reserve certain authorities for the state in governing livestock confinements and specify or reserve certain other authorities for local government in governing livestock confinements.

Minnesota represents one example of this approach. The state pollution control agency has primary authority over rules and implementation of environmental protection. Units of local government have primary authority over land use planning and siting issues within the limits of authority established by the state.

### **Option 5. Develop a Regional System of Joint Responsibility.**

With this approach, state policy makers develop and pass state authorizing legislation that specifies the statewide policy goals and recommended policy parameters for regional commissions. The state could then grant authority to regional commissions developing livestock confinement policy and implementation plans that carry out the state objectives. Modifications to the state recommendations could be made after hearing justification and evidence regarding local circumstances in the region. A preferred mix of diverse state and county appointees could be made to the regional commissions.

#### **Option 6. National Standards.**

Authority for establishing national standards for management and disposal of animal wastes has recently been proposed. In general, this approach could help to create more uniform standards across state boundaries and reduce the potential for competition among states in lowering environmental standards and enforcement. On the other hand, federal standards could reduce state and local flexibility in addressing unique local circumstances. In addition, pork production could move out of the country if the costs of additional regulation on domestic production are more than the competitive advantage that the nation holds over other producing nations.

The cost of flexibility at the local or state level is often the loss of uniformity at the state or federal level. Uniformity creates a common set of rules for competition with the state or nation. This tends to lower the transaction costs across political jurisdictions served by the market area covered. Border problems often occur when the full market area served is subject to differing regulations and policies. Thus, a federal approach would cover all states but would have little influence on pork produced internationally. On the other hand, the cost of state and/or federal uniformity is the loss of flexibility in meeting unique local, state or regional circumstances. State and federal policy, sometimes by accident or design, overlook or do not address important local issues.

Finally, an important policy question is which level of government has comparative advantages in siting, zoning, environmental protection, public health and safety. Each may have the comparative enforcement advantage in some, but not all of these areas. For example, there may be economies of scale in research and testing at the state level, but there may be other monitoring and information economies at the local level. It is compelling that decisions be made at the level that results in internalization of all significant cost externalities involved.