Chapter 1:

Introduction

Animal agriculture has always been part of rural America, from the earliest New England farms to the mammoth Western ranches that marked the settlement of the frontier. A classic early battle over animal agriculture in the West was waged over sheep and cattle on the open range. The question then was not whether livestock ought to be there, but rather which livestock were acceptable. Now we find more often that residents of an area are questioning where animal production ought to occur.

Many people in the United States today envision farming like a Grandma Moses painting – a quarter section of land with a small truck, garden, a field of corn, a field of beans and a pasture with Holsteins grazing peacefully. Combine that picture with a small town in the background and it creates what may be the most common conception of life in the United States outside of cities.

This vision of farm life was never entirely accurate. Like many artistic representations, Grandma Moses' idyllic view was also idealized. Missing from the paintings were the long hours of hard work, the years of failed crops, the odors of animals, and other realities of farm life.

Factors Shaping the Debate over Livestock

Three changes in rural Michigan (and in other states) have contributed to the current political and policy debate over the location of animal agriculture operations. These include changes in rural populations, changes in agricultural production, and changes in how property rights are understood.

Changes in the Rural Population

Movement of large numbers of people to the suburbs and rural areas began in earnest after World War II. It was stimulated in part by the search for this idealized American lifestyle, but there were other forces behind it as well. Among those were the pent-up demand for housing after the war, the sudden availability of a new federal mortgage insurance program to help first-time homebuyers, and the construction of the predecessors of the interstate highway system to provide rapid access to outlying areas. With this dispersed growth came the beginnings of land use conflicts in suburban and rural areas.

When the people in rural towns were mostly farmers or merchants who made a living serving farmers, the differences between rural activities and more urban ones rarely

turned into serious conflicts. Everyone recognized that the business of farming was really the business of the town. They typically viewed the activities on the farm as being no more a problem than the inconvenience created by a large truck temporarily blocking a street while it unloaded goods at a local store. Both were clearly serving the community, and the inconveniences of both were simply a factor of community life.

As urban dwellers fled to the suburbs and rural areas, however, the political nature of the relationship changed. The person living in the house on the edge or outside of town now might be a shift worker in an electronics plant or a teacher in an urban school or a clerk in a local boutique. Although all of those people depend on the farm economy for food, and the fortunes of farmers affect the economic well-being of entire communities, the practical and emotional connections are less direct. The sense of disconnection from farm life and the farm economy tends to make residents less tolerant of the realities of living near farming operations. Non-farming populations have moved even further from the city centers into rural Michigan. Some of these new commuters have purchased farm houses on former homesteads. Others have moved onto large lots divided from farmland. Their expectations of peace and quiet are those of city dwellers, not those of traditional rural people.

In addition, a continual increase in the affluence of the American population has changed expectations of the public with respect to environmental quality. A wealthier, more educated population is focusing more and more attention on how their quality of life is affected by their physical environment. As a result, reductions in environmental quality that might once have been acceptable or overlooked are now subject to much greater scrutiny.

When this attention to environmental quality is combined with shifts in where people are living, the implications for agriculture are particularly evident. Many residents of rural areas now have little connection to production agriculture and are, in fact, several generations away from any prior familial connection to farming. In addition, the movement of urban dwellers into suburban and rural areas continues and is being accelerated by internet connections that literally free some workers from having to locate near their jobs. Rural populations are now composed of significant numbers of residents who have no links to, and little knowledge of, agriculture.

Changes in Agricultural Production

Despite a general shift in population away from farms, total farm production has remained at high levels. Further, in most areas, the total acreage in production has remained relatively stable. In Michigan the number of farms has dwindled, but average farm sizes have increased. From 1954 to 1997, the number of farms in Michigan decreased from 138,922 to 46,027. The land area in farms also decreased from 16.5 million acres to 9.9 million acres. During

the same ten-year period, average farm size increased from 119 acres to 215 acres.

There have been similar shifts in the animal sector of Michigan's agricultural economy. Although there are still a significant number of smaller livestock operations, there has been a general increase in the number of larger operations in most livestock categories. For example, in 1993, there were 1100 pork operations with inventories of 100-499 head. By 1998, there were only 500 operations in this size category. During the same time period, the number of operations with more than 2000 head increased from 130 to 150. Similar changes in the dairy and cattle industries show a trend toward fewer but larger, more intensive animal operations.

In general, changes in the animal agriculture industry are characterized by three types of changes: growth in farm size, increase in vertical coordination, and changes in production locations. The greatest factor driving the movement toward larger farm size has been the introduction and adoption of new technologies that are more cost-effectively used on a large scale. Improved disease control and feed programs, coupled with the movement toward confined production operations and greater fixed investments, has led producers to increase output, lower per unit costs of production, and adjust to new sources of risk.

The movement toward larger farms with higher animal densities has been combined with changes in the type of coordinating mechanism used by input suppliers, farmers, and packers and processors. More emphasis on production contracting (where farmers own the facilities but contract to raise animals owned by other segments of the agribusiness sector – for example, processors) in the animal agriculture industry has been shown to reduce transaction costs, increase responsiveness to consumer demand, improve quality control (e.g., food safety, consistency, and uniformity), reduce risk for producers and afford production efficiencies from specialization. In addition, for many young farmers, production contracts (for example, in pork production) represent an easier way to get started in farming and obtain access to operating capital.

Along with changes in farm size and business structure have come changes in location of animal production. Locational changes in animal agriculture are characterized by two different types of adjustments: shifts of animal production between regions and clustering of production within a region. The shift of a considerable amount of pork production out of midwestern states and into the southeast is an example of a shift between regions. As another example, during the 1960s, traditional dairy states like Michigan and Wisconsin saw much of their dairy production move to western states; that trend has reversed in recent years.

Clustering in animal agriculture arises when production facilities locate in close proximity to one another within a given region. Often, a cluster of production operations may develop in close proximity to some other component of the industry, for example a new processing plant for the

commodity or an expanded market (e.g. new population center) for the product.

It is the clustering phenomenon that has, more often than not, triggered reactions from neighbors of new and expanding animal production operations and policy responses from local governments charged with guiding land use change. Most often, opponents of the observed industry changes voice concerns about water quality, odor, and associated changes in quality of life. However, this is not exclusively so. In many rural areas, local residents object to how the changes in animal agriculture change the character of agriculture in the area, and proponents of more traditional farming operations object to how those operations may be affected by animal industry growth.

One final note about sources of conflict. Much of the debate around animal agriculture and issues of land use has been characterized as a conflict between farm and non-farm rural residents, caused largely by the constant movement of urban residents who "don't understand agriculture" into rural areas. This characterization significantly oversimplifies reality. In fact, in many areas, existing farmers are vocal opponents of new and expanding animal operations. These farmers voice many of the same concerns expressed by their non-farm neighbors: water quality, odor, quality of life, and changes in the character of their community.

Changes in Property Rights Perspectives

The changing demographics and changing structure of animal agriculture are linked to a shift in property rights related to environmental quality. With more and more non-agricultural, rural residents, the previously understood and accepted negative impacts of agricultural production (i.e. dust, odors, etc.) have become less acceptable. In addition, the distinction between large, industrial-type farms and smaller, more diverse farms and their roles in environmental protection is increasingly scrutinized. Agricultural and non-agricultural residents, alike, are more critical of the environmental impacts associated with large, non-traditional agricultural operations.

The movement of a more affluent population into rural areas means that these residents bring with them certain assumed rights to environmental quality. Many of these new residents bring with them a political savvy and a willingness to become involved in local policy that has not traditionally characterized the rural, agricultural population. Clearly, then, both rights and responsibilities related to environmental quality in agricultural areas are being redefined.

Michigan's Agricultural Economy

Like the rest of the United States, Michigan is an increasingly urban state. The agriculture and food industry, however, remains a key component of the state's

economy and a dominant economic force in the state's many rural counties.

As public officials and citizens work together to plan for their regions, it is important to recognize the vital role of livestock and other forms of agriculture in the state's economy. By all measures, agriculture and its directly related industries fuel a large percentage of the state's economic engine. According to Michigan's Department of Agriculture, the food and agriculture industry is Michigan's second leading industry and contributes $40 billion to Michigan's economy each year. Michigan produces over 120 commercial agriculture products, and one out of every 15 Michigan citizens is employed in the food and agriculture industry. Each year, Michigan exports agricultural commodities valued at nearly $2 billion, ranking Michigan sixth in the nation for agricultural exports. Animal agriculture produces half of Michigan's agricultural income, with dairy the leading animal industry. Corn, hay and soybeans are the most valuable crops produced in the state, accounting for nearly 62 percent of the value of Michigan's crops.

The Role of Government

Thrust into the middle of debates surrounding animal agriculture are local governments – in Michigan, the counties and townships that have land use jurisdiction over rural areas. Long-time and recent residents are joining together and asking local government to protect their lifestyles from change. In doing so, they are little different from their neighbors in town who band together to oppose a new convenience store on the corner or a discount store on the entrance road to their neighborhood. In asking for protection, they cite entirely rational concerns about odor, noise, traffic and possible water problems from runoff.

On the other side, of course, are operators of livestock farms. They provide a key element in food production in the United States. They cannot operate in cities, because of land costs and other concerns. The only place that they can operate is in rural areas. Although they might welcome the opportunity to move to a location that is far from the nearest neighbor, that is hard to do in an area that was settled on quarter-section tracts, with a house every half-mile or so along roads at one-mile intervals. There is no doubt that part of the reason that some livestock operators are relocating their operations to states such as Kansas and Oklahoma is that those areas were settled on larger tracts, leaving larger clearances between neighbors and fewer neighbors within a given distance of a proposed operation. Fewer neighbors means less potential opposition.

Local government has a difficult job to do in this situation. Rational county and township officials recognize the value of the livestock industry to the entire state, as well as to their own communities. On the other hand, rational county and township officials recognize their duty to the citizens who want to preserve a good quality of life. Although the day-to-day business of government may have more to do with road maintenance than with disputes over land uses, the most fundamental role of government in our

society is to balance competing interests and to provide a reasonable set of rules to protect all interests.

Finding balance in this case means **planning** for animal agriculture as a viable and acceptable part of the rural community. That involves addressing the reasonable expectation of residents that the location of livestock operations will be considered with the same care as the location of other business enterprises, while protecting the ability of livestock operators to continue to be an important part of the business of Michigan.

The purpose of this handbook is to help local governments in Michigan to do exactly that – to create an environment in which their citizens are comfortable living with livestock and in which responsible agricultural operators are comfortable doing business. The following chapter, Chapter 2, lays the groundwork by explaining the need for long-range planning as a means of effectively dealing with the animal agriculture issue. Besides arguing for the importance of planning, the chapter presents a common-sense guide to preparing a plan. Chapter 3 describes the legal framework in Michigan for dealing with agriculture, rural land uses, and livestock issues. In Chapter 4, the handbook goes on to describe zoning techniques that can be and have been used to implement animal agriculture planning strategies.