Chapter 2:

Planning for Animal Agriculture

Land use conflicts can create enormous amounts of controversy. Historically, the definitive breeding ground for such conflicts has been the single-family residential neighborhood. Imagine, for example, the developer of an apartment complex in such an area or the nonprofit group that is attempting to renovate an old residence as a halfway house for substance abusers. The actors involved in the debate over feedlots and animal production facilities may be different and the physical landscape that provides the context may look different, but the issue is still one of land use. Any approach to seeking balance among different land uses and different activities should be based on planning. So it is with agriculture in general and animal agriculture in particular.

Recognizing the Need

Recognizing the need for a plan is the critical first step of any planning process. Planning is an orderly, thoughtful, proactive way of preparing for the future. Prominent planner Bruce McClendon has referred to planning and the ways that plans are put into effect as methods of mastering change. Regions and communities do change over time, and planning offers them an opportunity to manage that change.

Planning also underlies rational public policy-making. As anyone who has held an elected or appointed position within government knows, it is extremely difficult to make a calm and rational decision in an emotionally-charged situation. Emotions can run particularly high when local economic needs clash with a citizen group's or neighborhood's apparent desires.

When a new facility, such as a truck terminal, manufacturing plant, or animal production operation, is proposed, there are likely to be positive economic benefits for the county or township, but there may also be concerns about the impacts of the project on the neighborhood or area in which it is to be located. If decision-makers try to weigh these types of competing interests in the absence of established policy, they are unlikely to reach a rational decision.

Through planning, local governments can establish long-range policies to direct their day-to-day actions and to provide guidance in dealing with difficult decisions. Counties and townships in Michigan and elsewhere have long used planning to accomplish just such purposes. Through planning and zoning policies they have decided that some businesses – banks and retail stores, for example – belong in the downtown area while others, like auto body shops, do not. They have reached a decision that some

types of businesses – offices, perhaps – are acceptable home occupations within residential areas, while most other businesses are not compatible with the residential character of such settings. And they have decided they want to encourage uses that are important to the region's economic well-being: the industrial park, the grain elevator, and the animal production operation.

Those types of plans and the community values they reflect become law through the zoning map and zoning ordinances, and they guide public officials and private citizens in making decisions. The zoning map and ordinance tell the prospective body shop operator that the business cannot be located downtown and the hair stylist that such a business cannot be conducted at home. The map and ordinance also tell neighbors in the residential area that the only businesses that will be allowed in their areas are professional offices. Finally, they show downtown merchants that retailers, rather than manufacturers, will be allowed downtown. All of this adds up to predictability for existing residents and for those interested in developing a new use in the area. In essence, the plan provides early notification of the county or township's desires regarding land use relationships.

The predictability of the zoning map and ordinance can help to ward off land use conflicts before they become controversies. In those cases where a decision regarding a land use comes before a planning commission or governing body, the zoning map and ordinance provide policy guidance in reaching a decision.

Through long-range planning, Michigan's counties and townships can avoid some land use controversies and prepare for ones that cannot be avoided. At their best, plans can help prevent future land use controversies from developing and help address present conflicts by providing self-implementing guidance for what otherwise might be difficult planning decisions. When that does not work, plans at least provide a method for weighing competing interests.

Planning provides a vital foundation for dealing with tough land use issues like feedlot siting. It provides a forum for stepping back, taking a look at the forest as well as the trees and charting a course based on long-term goals. Regardless of the motivation, however, one of the most important steps in the process of planning is the first one: recognizing the need and setting out to get it done.

This chapter is intended to provide guidance to those Michigan counties and townships interested in preparing a plan or updating an existing plan to reflect agricultural land use goals. It begins by describing how agriculture, in general, and animal agriculture, in particular, might be incorporated into a county or township comprehensive or land use plan. The chapter goes on to describe a general strategy for preparing a plan, focusing on the types of information that are needed and possible sources for that information. (Appendix A provides a detailed discussion of several alternative planning approaches.) It is hoped that this chapter can be used by those who are about to embark on their first planning effort as well as by those counties and townships that simply need to update and

amend an existing plan to better meet their long-range needs.

Types of Plans

There are many types of plans. Two types are of primary interest to those counties and townships developing or revising a plan to more carefully address agricultural issues. These are the comprehensive plan and the land use plan.

Comprehensive Plan. Planners learn in professional school that such plans should be comprehensive geographically (covering the whole geographic area of the jurisdiction) and substantively (addressing all matters of interest to the community, from schools to solid waste), and that they should be relatively long-range, usually with a planning horizon of twenty years. A comprehensive plan often consists of multiple elements, dealing with things such as land use, parks and recreation, and capital improvements programming. Comprehensive plans almost always include a thorough Trends Analysis and at least some Opportunities and Constraints Analysis to provide context for the planning effort.

In counties and townships that need to plan for animal agriculture, that planning must be done in the context of all the other objectives and issues that the local governments face. Planning for animal agriculture, therefore, must be integrated with the local comprehensive plan. Agricultural land uses may be important to a community because of its desire to retain a rural environment. It may also be viewed as an important component of the local economy. An expanding animal agriculture may offer new employment opportunities in the community. In addition, the role that agricultural land uses play in the overall financial health of the community, in such areas as tax revenue generation and costs of public services, are important considerations. It is in the comprehensive plan that a community reflects upon and articulates the role that it expects agriculture to play in its future.

Land Use Plan. A land use plan focuses on physical land use issues in the community. This is the element of a Comprehensive Plan that is most relevant to issues like preserving agricultural lands and finding appropriate locations for animal production operations. An assessment of existing conditions, especially in the natural and human-made environments, is especially critical to guiding agricultural land uses into those areas to which they are best suited. (A detailed discussion of assessing existing conditions begins on page 2-4.) The best land use plans have a Comprehensive Plan for context.

Organizing the Process

Before actually setting out to work on the plan there are a few organizational matters to consider; namely who oversees the process and who does the work?

Oversight

Typically, the planning commission, which serves in an advisory capacity to the governing body (the county board of

commissioners or township board) will assume an oversight role in the plan preparation process. Sometimes a joint planning committee comprised of citizens and elected officials (county commissioners or township board members) will be set up for this purpose. Occasionally, special planning advisory groups, comprised exclusively or primarily of citizen members, are formed to oversee the planning process.

Whomever the board appoints to serve as the advisory group, their responsibility will be to convene meetings, review information, provide policy direction and coordinate the process. This group's role is advisory only. Ultimately, they will be recommending a plan to the board for adoption.

Legwork

The legwork of planning will likely fall to a combination of groups and individuals. Certainly, county or township staff can play a vital role in the planning effort. Staff members will likely have knowledge of and ready access to key information sources. Moreover, they are often well-equipped to deal with logistical and organization details, as well as technical questions that may arise.

Volunteers

Local volunteers also have a key role to play in preparing rural area plans. In fact, it is advisable to include as many people as possible in the planning process. Involving a broad cross-section of the county or township helps ensure that the plan presents a balanced approach, and therefore that it can be adopted. With volunteer citizen involvement, the work of preparing the plan can be spread out, which will be particularly important in those counties or townships that are not in a position to devote substantial staff time to the process.

Consultant

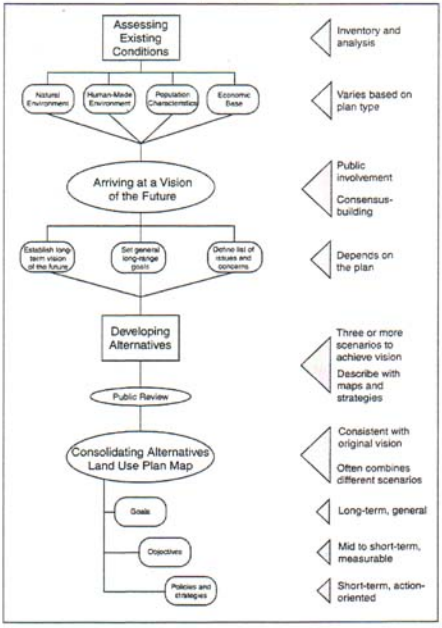
Even with the involvement of local officials and citizens, some counties or townships, particularly those unable to devote at least part-time staff support, may need the services of outside consultants. The role of consultants in the planning process can take several forms. Some jurisdictions have hired consultants to do nearly all of the technical work, while some get outside help only to perform discrete tasks like data collection and technical analysis. Others have solicited assistance in facilitating meetings and in helping to ensure open and productive dialogues among various interest groups and citizens. In Michigan, regional planning commissions exist around the state, offering planning assistance to jurisdictions within their service regions.

Developing the Plan

Assessing Existing Conditions

Most approaches to community planning start from the present. It is essential to know the current status of a county or township before trying to plan for its future. Knowing what and where the community is now is as important as the little star with the "you are here" note on a directory map – without knowing where one is starting, it is impossible to figure out how to get anywhere, even with a map.

Developing a Plan



In that respect, planning for a county or township is quite different from planning for a new business, for a wedding, or for a new military campaign. In planning for something entirely new, one starts with a clean slate. In contrast, much of the future of a community is created by the reality of its present. A college town will consider the future of the college in planning the future of the town. A community with high unemployment due to the closure of a manufacturing plant will plan differently than will a community that has a shortage of workers. Rural counties and townships in Michigan will undoubtedly want to develop plans around a future that includes agriculture. And in many parts of the state, that will include animal agriculture.

Thus, most good plans start with an assessment of existing conditions. An existing conditions analysis includes at least the following elements:

- Natural Environment
- Human-made Environment
- Population Characteristics
- Economic Base

These elements are described below, with suggestions for the types of information to collect, how the information should be presented, and where it can be obtained.

Natural Environment. This assessment consists of an inventory and analysis of natural environmental features found within the county or township and the surrounding area with a particular emphasis on the opportunities and constraints suggested by those features. Flood-plains, for example, are generally considered a development constraint. Other environmental resources may represent a constraint and an opportunity. Sandy soils, for instance, may be excellent for growing potatoes but too permeable for on-site sewage disposal. However, soils that are very productive for agricultural purposes may also be found in areas that are attractive for residential development. The very simplest form of opportunities and constraints assessment can, in fact, be based on a careful interpretation of the soil surveys that are available for most counties in Michigan.

SOILS CHARACTERISTICS			LAND USE SUITABILITY				
Association (% County)	Drainage Character	Slope	Building Development	Septic Systems	Trench Sanitary Landfills	Area Sanitary Landfills	Sewage Lagoons
Spinks	well		Slight/Severe	Slight	Severe	Severe	Severe
Wasepi (3.9%)	poor	0-8%	Moderate/Severe	Severe	Severe	Severe	Severe
Marlette	well		Slight/Severe	Severe	Severe	Severe	Severe
Capac	poor		Moderate/Severe	Severe	Severe	Severe	Severe
Metea (2.3%)	well	1-5%	Slight/Severe	Severe	Severe	Severe	Severe
Oakville	well		Slight/Severe	Severe	Severe	Severe	Severe
Selfridge	poor		Moderate/Severe	Severe	Severe	Severe	Severe
Perrinton	well		Slight/Severe	Severe	Moderate	Slight	Moderate
Capac (1.9%)	poor	0-8%	Moderate/Severe	Severe	Severe	Severe	Severe
Ithaca	poor		Moderate/Severe	Severe	Severe	Severe	Severe
Tekenink	well		Slight/Severe	Slight	Severe	Slight	Severe
Marlette	well		Slight/Severe	Severe	Severe	Severe	Severe
Plainfield (1.9%)	well	2-6%	Slight/Severe	Severe	Severe	Severe	Severe
Spinks	well		Slight/Severe	Slight	Severe	Severe	Severe
Teasdale	poor		Moderate/Severe	Severe	Severe	Severe	Severe
Boyer	well		Slight/Severe	Severe	Severe	Severe	Severe
Wasepi	poor	0-6%	Moderate/Severe	Severe	Severe	Severe	Severe
Plainfield	well		Slight/Severe	Severe	Severe	Severe	Severe
Metea	well		Slight/Severe	Severe	Severe	Severe	Severe
Chelsea (1.1%)	well	2-6%	Slight/Severe	Severe	Severe	Severe	Severe
Marlette	well		Slight/Severe	Severe	Severe	Severe	Severe
Selfridge	poor		Moderate/Severe	Severe	Severe	Severe	Severe
Houghton muck	poor	little	Severe	Severe	Severe	Severe	Severe
Cohoctah (0.9%)	poor		Severe	Severe	Severe	Severe	Severe

Soil maps – particularly when used in conjunction with tables of soil suitability found in soil surveys – yield a great deal of useful information on agricultural land productivity and on opportunities and constraints for other types of development. One good way to convey soils information is to create a table with soil characteristics converted to suitability classifications (agricultural productivity, on-site sewage disposal, construction, etc.). This table is an example using data from the Kent County Soil Survey published by the USDA Natural Resources Conservation Service.

Information to Collect. An assessment of the natural environment should be based on an inventory of environmental features. As is true of nearly all of the existing conditions assessments, the kinds of information that should be included in the inventory depend on (1) the type of plan being prepared and (2) the nature of the community for whom the plan is being prepared. Environmental inventories typically include information on several of the following features:

- Floodplains
- Wetlands
- Surface Water and Watersheds
- Ground Water Supplies
- Soils
- Vegetation

How to Present the Information. The information collected as part of the environmental assessment should be presented on maps and explained in accompanying tables and text. Many counties and townships are investing in computerized Geographic Information Systems (GIS), which enable users to compile, manipulate, analyze and display spatially oriented data. The types of natural environment information listed above can be compiled and displayed with relative ease using GIS.

Where to Get the Information.

- USGS Maps
- Soil Surveys
- Natural Resource Conservation Service Offices
- County Extension Offices
- Michigan Department of Natural Resources
- Michigan Department of Environmental Quality
- Field Surveys

Human-Made Environment – Public (Infrastructure). The presence of major roadways and the availability of public sewer and water service greatly influence an area's development potential. Undeveloped portions of a region served, or proposed to be served, by major roadways, public water, and sewer are likely areas of future non-farm growth. Knowing where future non-farm growth is likely to occur is helpful in planning where future animal agriculture should and should not be located.

Information to Collect. An assessment of the human-made environment should be based on an inventory of existing and planned public facilities. Again, the type of information that should be collected depends on the type of plan and the nature of the county or township. Assessments of public facilities nearly always include information on transportation, water, and sewer facilities. The following types of public facilities and services might also be assessed:

- Drainage
- Fire and Public Safety
- Emergency Medical
- Schools
- Parks and Recreation
- Libraries and Public Buildings
- Solid Waste

How to Present the Information. The information collected as part of the infrastructure assessment should be presented on maps and explained in accompanying tables and text. In the case of water and sewer service, for example, a map showing existing and proposed service areas could be prepared to visually depict potential growth opportunities. This map data could be accompanied by tables and text discussing capacity issues and estimates of when planned improvements are likely to become available. As with the natural environment information, the infrastructure information can also be compiled, analyzed and displayed using GIS.

Where to Get the Information.

- Comprehensive Plans
- Utility Master Plans
- Department of Transportation
- Capital Improvement Programs
- Local Public Works Departments
- Field Surveys

Human-made Environment – Private. Existing land-use and development patterns are an extremely important determinant of future land use patterns. Moreover, the availability of private facilities such as railroad lines, truck terminals, grain elevators, sale barns, industrial parks, and even vacant industrial buildings also offer significant opportunities, while lack of such facilities may be a significant constraint to attracting or keeping some types of development in an area.

Information to Collect. An assessment of land use patterns and other features in the human-made private environment should be based on a visual inventory of the community. For the purposes of preparing a county or township plan it is not necessary to collect detailed land use data for cities or villages. It would be a good idea, however, to collect at least general land use and development trend information for areas just inside the corporate limits of cities and villages. This type of information will yield valuable insights into future geographic growth trends. While conducting the land use inventory, land development and construction activity should be noted; it will come in handy later on as you think about where growth seems to be moving.
The following list of land use types should provide an ample level of detail for the land use inventory:

- Residential, Single-Family
- Residential, Duplex
- Residential, Multi-Family (3+ units in the same building)
- Commercial (retail, wholesale, service, and office)
- Warehouse (warehouse and storage)
- Industrial (manufacturing, processing, fabrication, etc.,)
- Civic/Institutional (school, hospital, church, etc.)
- Agricultural, Crop Production (note type of crop)
- Agricultural, Animal Production (note feedlots, livestock, dairy and poultry)
- Agricultural Support (commercial and industrial)
- Forested Land
- Vacant/Undeveloped

How to Present the Information. The information collected as part of the land use and human-made environment assessment should be presented on maps and explained in accompanying tables and text. A table showing existing acreage devoted to different land uses is an excellent supplement to the map. As well, this information can be compiled, analyzed and displayed using GIS. If historical information on land use and other resources in the human-made environment is available, comparing that data with the existing inventory can provide a keen illustration of local trends.

Where to Get the Information.

- Aerial Photography
- Field Surveys
- Assessor's Office

Population Characteristics. A region's overall population and its characteristics – age, education, employment – are critical influences on its future. A county or township with a well-trained labor force and relatively high unemployment has many opportunities that are simply not available to areas with a poorly-educated labor force or

with one that is fully employed. Similarly, historical population trends offer at least some insight into the likely pace of future growth. In addition to an analysis of existing conditions and past trends, many plans need to include projections of future growth trends.

Information to Collect. An assessment of population characteristics and trends should be based on the most up-to-date and reliable data available, typically the last U.S. census. The following basic types of demographic data are usually collected during this sort of assessment:

- Number of People (by age, sex, and race)
- Number of Housing Units
- Number of Households
- Average Number of People
- Population Projections (20 years)

How to Present the Information. Most types of population-related information can be analyzed and compared in tables and charts. However, GIS offers the opportunity to display population density data in a thematic fashion using census geography levels finer than the county or township level (such as the census tract, block group, block number area or block). Geographic growth trends can be depicted on a map showing the general location of past, present and future projected development activity in the county or township.

Where to Get the Information.

- U.S. Census Bureau Publications (City and County Data Book, Census of Population and Housing, http://www.census.gov)
- Michigan Information Center, Michigan Department of Management and Budget
- Public Utilities

Economic base. A county or township's current economic base has a profound influence on its future. The industries and businesses now located in a county or township are likely to provide a large percentage of future employment. To the extent that new businesses come into an area, they are likely to be similar to or related to existing businesses.

Information to Collect. As is the case with population and demographics, a county or township's economic base can best be analyzed by examining up-to-date and reliable data widely available from other sources, notably the U.S. Bureau of the Census and the Michigan Information Center. The following basic types of economic data will provide useful insights into the local economy.

- Employment by "Industry" Type (Standard Industrial Classification)
- Unemployment Rates (Existing and Historical)
- Labor Force Estimates by Occupation Group
- Tax Base Data
- Land and Improvements by Land Use Type (Residential, Commercial, Industrial, Agricultural)

How to Present the Information. Economic data can best be presented in tables and charts. A geographic (map) portrayal of data on economic investment in animal operations would be a very useful way of identifying areas where protection of

existing operations (i.e., investments) may be necessary, or where new facilities and expansions of existing ones may be desirable.

Where to Get the Information.

- Assessor's Office
- County Business Patterns, U.S. Census Bureau (Existing and Historical Data)
- Michigan Information Center, Michigan Department of Management and Budget
- Public Utilities

Other Resources. There may be other unique factors that influence a region's future. The reputation of an area's public schools or the existence of nearby recreational opportunities, for example, can provide a springboard for growth or tourism-related development. These and other types of unique community resources should be included in the inventory of existing conditions.

Arriving at a Vision of the Future

The specific purpose of this step of the planning process depends on the precise nature of the plan being prepared. It can be used as an opportunity to establish local residents' long-term vision of the future or to set general long-range goals for the county or township. It can also serve as the first opportunity to define a list of critical issues and concerns to be addressed in the plan.

Citizen participation and broad-based community involvement are critical features of any successful planning effort, especially at this point in the process. The purpose of setting goals and of developing a shared vision, after all, is to achieve consensus about the "big picture" from individuals and groups with different views (sometimes referred to as stakeholders, because they have a stake in the outcome). Even when used as an issue identification exercise, the desired outcome is broad-based consensus. Although some vision or goal-setting work can occur prior to or simultaneously with data-gathering and analysis, it will usually be helpful to have collected information before working to develop a vision for the future. Information on existing land use, environmental features, and economic factors can be used to educate and inform decision-makers, interest groups, and the public on the opportunities and constraints that will affect the future.

Developing Alternatives (Scenarios)

After completing the assessment of existing conditions and garnering consensus about the county or township's long-range, shared vision (or, in the case of an Issue-Driven process, the issues that need to be addressed), the next step is to develop different alternatives for getting there. These alternatives, sometimes referred to as scenarios, are really just a series of options or paths to the future. Typically, three or more such scenarios are presented in the form of maps and general descriptions of the types of strategies that can be used to ensure that they can be carried out.

Once the alternatives have been developed, they should become the focus of public review and discussion. Again, using a process that is broad and inclusive, the

scenarios should be scrutinized and reviewed by the public with an eye toward identifying which alternative is likely to do the best job of helping the community realize its previously stated vision. In weighing the alternatives, citizens are likely to encounter just the sorts of balancing issues described in the introduction to this chapter.

Consolidating Alternatives

Very often, no single scenario will offer such clear advantages that it can be selected as the preferred plan. Ultimately, some combination of alternative scenarios may best reflect the desires of the community as a whole.

Ideally, the preferred plan will be consistent with and move the county or township closer to the vision established earlier in the process. Moreover, the selected plan should be consistent with other plans and strategies in effect throughout the county or township. If it is not, action will need to be taken to remedy such inconsistencies.

The preferred plan should include statements regarding the long-term goal toward which the plan is aimed, as well as a series of mid-range and short-term objectives that can be used to evaluate progress toward the overall goals. As with the scenarios developed in the preceding task, it should include a description of the types of policies and strategies that will be used to ensure the plan's implementation. The preferred plan will ultimately be the subject of review at public hearings before the planning commission and board of county commissioners or township supervisors. These sessions will provide still additional opportunity for public comment and input. The board has authority to adopt the plan, reject it or refer it back to the planning commission (or other advisory group) for revisions.

Statements of Policy

A comprehensive or land use plan should contain explicit guidance about how the plan will be implemented. Most often this guidance takes the form of policy statements. They may consist of text and maps, particularly the land use map. A plan that addresses agriculture may include statements of policy on land use, including agriculture, non-farm development, and other matters of local importance. These statements should provide rationale for more specific parts of the plan, such as why one alternative growth scenario was chosen over another (as reflected in the land use map), or why certain implementation steps are favored.

Types of maps that might be included in the plan include:

- maps identifying areas suitable for long-term agricultural uses and animal agricultural uses. These might be divided into two or more types of agricultural use, reflecting intensity of the encouraged agricultural uses and their potential for issues of compatibility with other uses; and
- maps identifying areas adequate to meet projected housing and other non-farm development needs. An urban growth boundary could be used to define the outer edge of these areas.

Implementing the Plan

Once the plan has been adopted, no decisions related to growth, development, land use or public facility planning and budgeting issues should be made without examining whether such decisions would be consistent with the plan. Additionally, implementation tools should be developed and adopted to help ensure that the plan's goals are carried out in day-to-day activities. The most common plan implementation tools are the zoning ordinance, subdivision regulations and capital improvements programs.

Monitoring and Updating the Plan

Monitoring a plan's effectiveness is an important follow-up activity to the process of preparing it. Ideally, the plan will include a number of measurable objectives that will allow the county or township to track how much progress is being made toward its goals.

No matter how thoughtfully and carefully prepared, all plans need to be updated and revised every few years, usually at least every five years. And no matter what its age, any plan that is not working as a guide to decision-making should be revised or redone.

Conclusion

Planning provides a guide to the future. Perhaps more importantly, it provides a context of making decisions about the future. A county or township can best make decisions about the agricultural activities and agricultural operations in and around it if it has a plan to provide that context.