
Sponsors

University of Minnesota

College of Veterinary Medicine

College of Agricultural, Food and Environmental Sciences

Extension Service

Swine Center

Editors

W. Christopher Scruton

Stephen Claas

Layout

David Brown

Logo Design

Ruth Cronje, and Jan Swanson;

based on the original design by Dr. Robert Dunlop

Cover Design

Sarah Summerbell

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, or sexual orientation.

Raising the environmental bar: Societal trend or over-regulation?

Larry D. Jacobson, Ph.D., Professor & Extension Agricultural Engineer, Robert G. Koehler, M.S.,
Extension Educator & Livestock Systems/Swine
University of Minnesota, St. Paul Campus & Southwest Research and Outreach Center

Introduction

Farmers or producers of agricultural commodities have for a long time prided themselves in being good stewards of the soil, water, and air. Most farmers, including animal producers, have been able to find a balance between managing the natural resources and making a profit. In the first half of the 20th century, the public cared little about the care that farmers provided to the environment. Even though there is a legitimate ethical concern over the environment, up until the 1950s, only a few individuals and agencies expressed concern for protecting the soil, water, and air. The public concern over environmental protection increased dramatically, along with other social issues, in the 1960s, first toward large non-agricultural industries, then to agriculture. Government responded to these concerns with the creation of various federal and state "Environmental Protection Agencies" (EPAs) in the late 1960s and early 1970s. These agencies developed mainly water quality standards that industries, including animal agriculture, were forced to comply with. These early standards were typically based on environmental criteria (e.g., nitrogen uptake by crops) but some on human health criteria (drinking water standards). Toward the end of the 20th century and now at the beginning of the 21st century, however, it seems that more of the environmental regulations are based on human health issues, especially those concerning air quality standards.

Paralleling the growth of the regulatory agencies is society's increased interest in environmental issues as well as interest in related social, ethical, and esthetic factors that often help shape public opinion regarding appropriate environmental regulation. Again in the early 20th century, the general public in the United States had very little interest in environmental protection practices by agricultural producers or other industries. During this period, food quantity, not food or environmental quality, was the main concern. As prosperity increased in the United States during the 20th century, there was an increased concern over food quality and safety. Related to this was the public's interest in what inputs were being used during the production of food and how the environment was being affected. These trends have put agriculture, in general, and animal and pork producers specifically, at odds with many environmental and special interests groups.

Farmers find themselves trying to defend practices which no one questioned 10, 20, or 30 years ago. Attacks over environmental mismanagement deeply upsets most producers who historically have not had to deal with such controversies and who typically have less experience in resolving business related disputes.

Thus, it would seem that the raising of the environmental bar or requirements for production agriculture has its roots in public opinion. Often these concerns may not be widely held by people, but because of well organized and skilled organizations advocating for greater regulation, public opinion is created for that regulation from a platform of righteous indignation. Regulatory agencies have responded to this growing public concern by creating more stringent environmental regulations. Agricultural groups that want more moderate regulatory policies need to make a more effective case with the general public and policymakers. Some reviews indicate that opportunities for constructive dialogue between producers, government agencies, local citizens, and public interest organizations addressing animal feedlot issues are limited.¹

Increased environmental regulations

Federal and state regulatory agencies have gradually increased the environmental requirements for livestock and poultry producers in the United States during the last 30 years. Some states established "feedlot" requirements for a majority of animal producers in the early 1970s that primarily protected surface- and groundwater. These restricted the runoff from animal production sites and forced construction standards, including various types of liner requirements (clay, plastic, etc.) for earthen manure storage designs. Since a very high majority of the manure produced on operations is used as fertilizer on cropland, more recently, nutrient or manure management plans are now required to reduce risk of nutrient application in excess of crop need or uptake. The most recent regulation requirements involve air quality. Several states now limit air emissions from an animal operation by setting a gas concentration limit at the property line (Minnesota's H2S standard is 30 ppb). Thus, there have been increasing regulatory requirements during the past 30 years on animal agriculture in the areas of water, soil, and air resources.

Reasons for this increase in both breadth and level of protection are complex and varied, depending on the state or local situation. However, most is driven by public concern, expressed by advocacy groups and by individual citizens either directly affected or fearful of potential negative impact. Concerns include water quality degradation, human health issues related to air quality, esthetics such as odor impacts on quality of life and property values, and concerns for loss of a way of life (small scale agriculture versus a more industrialized type) that often are expressed through environmental issues. No matter what the specific reasons, environmental regulations will probably continue to increase as long as public concerns over animal production systems remain in the public eye. Increased capacity for communication, organized activism, and increasing public wealth point to continued attention unless some other issue takes its place.

Societal trends

The National Pork Producers Council community relations module for their environmental assurance program² emphasizes the importance for pork producers to develop a “community relations” program. The module lists four factors that are driving these trends. These factors include the following:

- Consumerism
- Urbanization
- Food safety concerns
- Natural resource awareness

Consumers are taking a much more integral part in the food production systems. Demands for specialty type products, such as organically grown meat, are beginning to effect animal agriculture production. Reasons for this change are the increased visibility of the livestock (pork) industry due to larger production sites along with media attention. More attention from activist and consumer groups as well as development of holistic philosophies has changed people’s attitudes about animal production systems.

Urbanization has broken most people’s ties to production agriculture. Gone are the days when some family member (uncle or aunt, grandparent or cousin) was involved in farming and would expose production agriculture practices to urban kids or adults. Instead, attitudes about agriculture are now obtained through television, movies, or other sources that are seldom accurate or realistic. Animal producers face a major challenge in educating the general public on modern production practices to influence people’s attitudes on policies and regulations that are fair and realistic for everyone.

There is increasing concern over food safety and security as the world’s population continues to grow. The world’s food production and delivery systems are becoming more sophisticated and difficult for the common person to understand. Gone are the days when the “American Farmer” was viewed as a trusted individual who was producing food and fiber for the country and the world. This has been replaced by the image of a corporate food production system that is not only getting larger and more specialized but also more concerned about profit and less concerned about quality and safety. While the consuming public still wants low cost food, they are also finding these “industrial” trends in food production in conflict with their personal values on how food should be produced. These attitudes are value-driven and based on perceptions. Little evidence exists to suggest a “best” way to produce food. Negative perceptions about food production, at least in part, originate from producers themselves who criticize other producers who use different techniques. Varying types of producers, as individuals or in organizations, accuse others of producing food in ways that are harmful to the environment, unsafe, and damaging to the rural community. Such accusations are assimilated by the public in a more generic way and can result in negative images for agriculture and ultimately more regulation for everyone.

Many people look at environmentally friendly lifestyle choices as optimum goals. Conservation of natural resources and recycling of waste material are promoted for many industries, including animal production. Current production techniques for pigs are many times not viewed as being very environmentally friendly, thus creating conflicts between consumers and producers.

One of the dilemmas facing animal agriculture is that, on the surface, it seems very logical that producers should be expected to apply manure nutrients at agronomic rates, contain all runoff, keep detailed and accurate records, utilize the best technologies, etc. However, in the real world the vagaries of weather, equipment performance and failure, economic hardship, and human error may create situations where complete compliance becomes temporarily impossible. Often, incomplete compliance or temporary inability to comply may not have long-term environmental effect, but the pressure to achieve 100% compliance may put producers out of business.

Pork producers need to be aware of societal trends and shifts in public thinking so they can better understand why people are suddenly so interested in food production and environmental protection. Only through public education will the increasing environmental regulations become more balanced to a level that protects human health and the environment plus provides a safe and abundant food supply but at a cost that is competitive for United States producers.

Practical implications and producer strategies

From an industry-wide perspective, two strategies seem apparent. One is to avoid high concentrations of animals at one site. For instance, four 3-barn sites are likely to receive less criticism and regulatory oversight than one 12-barn site. High numbers of animals at one site are likely to increase odor emissions, increase logistical problems in dispersing nutrients, and serve as a lightning rod for those who value small scale agriculture.

A second industry strategy is to develop and adopt mitigating technologies that can reduce odor emissions and dispersion, manure treatment techniques that can increase ability to transport nutrients greater distances, and equipment to apply nutrients uniformly at lower rates.

For individual producers, one of the most important strategies in responding to or dealing with concerns over soil, water, and air quality is to make sure you are implementing practices which are environmentally friendly. Producers must first “walk the walk” when it comes to environmental practices. Otherwise they are in an indefensible position. This means not only complying with all regulations but, where possible, exceeding the environmental standards.

Some specific items to implement would include the following:

- Consider location and visibility when planning new or modifying existing sites; make sure setback requirements are met or exceeded, if at all possible.
- Check prevailing winds and topography to assist in determining how odors and other air emissions, such as dust and flies, might affect neighbors.
- Consider developing a landscape plan for the production facilities and manure storage unit to prevent it from becoming an eyesore. Fences, earthen berms, and plant materials can all be used to help “soften” the visual effect of production buildings to passersby and visitors.

Another strategy is to communicate to the general public the positive environmental practices that a farm is already doing. The following items should be followed to accomplish this educational goal:

- Keep neighbors informed of pending changes and actions.
- Conduct tours of new facilities for officials, staff, and the public to reveal to everyone your willingness to operate openly.
- Communicate nutrient/manure and odor management plans to people who will be affected. Determine dates and locations that should be avoided.

- Establish a complaint system. Communicate very clearly that people should contact you first before other action is taken. Make sure every complaint, no matter how small, gets a response from you.
- If you are at fault, take responsibility for the actions and take appropriate actions.

Finally, try and practice a “good neighbor” policy at all times. If you demonstrate through actions and words your respect for the environment, you are well on your way to reducing or nearly eliminating conflict over environmental concerns from neighbors and concerned citizens. It is also important to support the local community by buying from local businesses and participating in local school, church, charity, and civic programs.

Conclusion

There is no doubt that animal agriculture today has many more environmental regulations and requirements than the industry did a generation ago. It would seem that the expansion in soil, water, and air quality regulations have resulted more from the changing public opinion of production agriculture than from the state and federal regulatory decision making. Regulations and the people writing and enforcing these rules are responding to societal trends. Thus, the best way to turn this trend around is to work on changing public views about the sustainability of animal production in the United States.

In the short term, probably the best way to avoid conflicts over environmental issues is to be proactive. As with most things, it is much easier dealing with issues before they become problems. However, even the most conscientious animal producer will sooner or later be involved in environmental conflicts. Utilize available technical resources to try and get the best science available for dealing with the problem. Use consultants for not only dealing with technical aspects but also the social aspects. Realize that not everyone may be satisfied with the results, including yourself.

Because of societal trends and increased concern over environmental issues, animal producers should be prepared to deal with this topic on a routine basis. Obtaining support from local producers’ groups and other producers individually can be a big help in learning how to respond in a responsible manner yet protect and be aware of their own rights. Cooperation and communication will go a lot further than confrontation. Try and understand where other people are coming from and be ready to change if it will make a difference. Remember, actions speak louder than words.

References

1. GEIS (Generic Environmental Impact Statement). *Role of Government Technical Work Paper*. 2001. 204 pages. State of Minnesota Environmental Quality Board (EQB) publication.
2. *Community relations module of the Environmental Assurance Program*. 1995. 76 pages. NPPC (National Pork Producers Council). Clive, IA. 50306.

