

Ensure Practices to Protect Public Health

Hog farmers recognize their obligation to protect public health by:

- Using management practices consistent with producing safe food
- Managing the use of animal health products to protect public health
- Managing manure and air quality to protect public health



Producing Safe Food

As noted in the first ethical principle, “Produce Safe Food,” there are multiple safeguards in place to help ensure pork is safe for everyone, including:

- Comprehensive education and training through PQA Plus that offers certification for farm personnel in safe production practices
- Regulatory oversight and/or inspections by the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA)
- Research funding by the Pork Checkoff, the USDA and many of our nation’s universities to unlock deeper understanding of production issues that impact public health

The First Line of Defense: Farm Biosecurity

Pigs, like people, can become ill from a variety of diseases. Farmers naturally want to defend against any threat to their herds, workers or the public. Therefore, biosecurity measures — management practices designed to prevent the introduction of diseases and disease-causing agents into a herd — are essential. One way to promote biosecurity is to carefully manage access to and movement from a farm of anything capable of carrying disease, including people, pigs, birds, wild animals, rodents, equipment and water. The pork industry’s leading education and certification program, Pork Quality Assurance® Plus (PQA Plus®), provides farmers and farm personnel information on how to implement detailed biosecurity protocols.

Focus on biosecurity occurs at many different levels, including through industry, universities, organizations and the U.S. government. There are multiple entities that provide input on biosecurity activities as outlined below.

USDA Animal and Plant Health Inspection Service (APHIS) Veterinary Services

APHIS has oversight of all animal health issues. APHIS develops and administers programs to defend America’s animal and plant resources from agricultural pests and diseases. In the event that a pest or disease of concern is detected, APHIS implements emergency protocols, which can include strict biosecurity procedures, and works closely with veterinarians and industry partners in affected states to quickly manage or eradicate the disease.

National Animal Health Monitoring System (NAHMS)

Under the direction of APHIS, this program conducts national studies by combining the efforts of multiple government agencies, institutions, and public- and animal-health professionals and provides up-to-date trend information to decision-makers in the livestock industry.

“One of the many ways that we measure antibiotic use in our operation is to look at how much we spend on feed antibiotics for each pig that we sell. It makes good business sense to use antibiotics only when we need them. The trend over the last six years has gone from spending around \$3 a pig down to less than \$1. And that has stayed pretty consistent for the last several quarters.”

Heidi Vittetoe, farmer, Iowa

Modern Farming Practices Promote Biosecurity

Generations ago, it was nearly impossible to keep diseases away from pig herds, because pigs were usually raised outdoors. There was relatively little understanding of basic biosecurity measures that help prevent the spread of disease among animals, people and supplies. Today, farmers are armed with information and technology necessary to better protect animals and the food supply.

Responsible Antibiotic Use Remains a Priority

Antibiotics are an important part of a comprehensive herd-health program on farms of all sizes. Experts agree that disease in food animals can threaten food safety, so it is important to protect animal health. There are many steps farmers take to protect herd health, and judicious use of antibiotics is one part of an overall herd health management plan. Antibiotics represent considerable cost to farmers, so they naturally want to minimize their use whenever possible. Responsible antibiotic use, combined with other practices relating to proper diet and nutrition, access to fresh water, vaccinations, barn sanitation and biosecurity all work to protect pig health. The pork industry supports science-based approaches to ensure that antibiotics used to advance animal health are safe for the food supply.

PQA Plus: Principles of Responsible Antibiotic Use

Farmers' guidelines call for:

- Principle I: Take appropriate steps to decrease the need for the application of antibiotics.
- Principle II: Assess the advantages and disadvantages of all uses of antibiotics.
- Principle III: Use antibiotics only when they provide measurable benefits.
- Principle IV: Fully implement the management practices described for responsible use of animal health products into daily operations.
- Principle V: Have a working veterinarian/client/patient relationship and follow the responsible antibiotic use guidelines.

“A good biosecurity program is the first line of defense in disease prevention, and it’s an ongoing process that requires vigilance and attention every day.”

Dr. Lisa Becton,
director, swine health and
research, National Pork Board

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Biosecurity Basics

The procedures listed below are among the suggested actions toward the development of a herd biosecurity plan as outlined in the PQA Plus book:

- Limit the number of visitors to the facility and minimize their contact with the pigs.
- Require visitors to register upon arrival and report, in detail, any recent contact with animals and the time gap between animal or farm visits.
- Supply outer clothing (e.g., coveralls, plastic boots) to all visitors.
- Require workers and visitors to wash their hands, or shower, before entering animal areas. (Some facilities also require visitors/employees to shower upon leaving their pork operation.)
- Prohibit livestock truck drivers from entering animal areas, as they are likely to have been on other farms or agriculture operations.
- Require trucks to be cleaned on arrival at a farm and/or require all visitors' vehicles to be parked at a designated location away from where animals are located.
- Take great care in introducing any new pigs to a facility by conducting an extensive veterinary evaluation and/or placing the new pigs in temporary isolation to ensure that no diseases can be spread.



“You need only look to the history of the PQA Plus program to realize the value farmers place on using antibiotics in a strategic and judicious way.”

Dr. Paul Sundberg,
vice president of science
and technology, National
Pork Board

Safeguards for Antibiotic Use

Regulations and safeguards are in place to ensure that antibiotics for food animals are safe and administered in a responsible manner. The following safeguards are in place to monitor this aspect of pork production on a constant basis.

- The FDA has regulatory oversight for review and approval of all antibiotics used in pork production and prohibits using antibiotics in ways that are not on the label.
- The FDA regulates antibiotic use in both humans and animals and inspects the feed mills that produce medicated feed.
- FSIS monitors and tests the meat to ensure there are no harmful residues.
- Veterinarians also play an important role in ensuring judicious use of antibiotics.
- The PQA Plus certification program provides good production practices for producers that reinforce the responsible use of antibiotics.
- The USDA inspects processing facilities to make sure those regulations for antibiotic use are followed.
- Pork industry organizations at the state and national levels have a long history of working with farmers to comply with all regulations.

Environmental Management

Hog farmers are proactively involved in managing manure and air quality to protect public health. As both food producers and community members, hog farmers understand the impact their operations have on the world in which they live. Ongoing research and innovative practices in this area will lead to even more sustainable, environmentally sound production methods.

To learn more about specific practices, safeguards and oversight on environmental management, information can be found under Ethical Principle #4, “Safeguard Natural Resources in All of Our Practices.”

“Being a fourth-generation farmer, I can tell you that we have significantly decreased the amount of antibiotics we are using today compared with what my father and grandfather used when they were producing pigs.”

Dereke Dunkirk, farmer, Illinois



“Farmers and their veterinarians have a limited number of health management tools. They realize the importance of these tools and make every effort to use them for the benefit of the animals and public health.”

Dr. Scott Hurd, associate professor, College of Veterinary Medicine, Iowa State University

Misconceptions of Antibiotic Use in Livestock

To protect pig health and food safety, it is essential to take a science-based approach when assessing antibiotic use. Dr. Scott Hurd, associate professor at the College of Veterinary Medicine, Iowa State University, addresses some misconceptions about antibiotic use in hog farming.



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Myth: Drug-resistant infections such as methicillin-resistant *Staphylococcus aureus* (MRSA) in humans, which have grown significantly over the past two decades, are attributed to the overuse of antibiotics in livestock.

Dr. Hurd: Most drug-resistant infections of concern to the Infectious Disease Society of America have little to no relationship to animal agriculture. The types of drug-resistant infections that are lethal are often associated with hospital-acquired infections — and the antibiotic used in those facilities. According to the FDA, resistance in foodborne illness is stable to declining over the last several years. Scientific risk assessments conducted by myself and others have shown a person is more likely to die from a bee sting than have a mild illness due to a resistant infection acquired from on-farm antibiotic use.

Myth: Antibiotics that are fed to healthy animals to promote growth and prevent disease are contributing to a public health crisis.

Dr. Hurd: Strategic use of antibiotics in animal agriculture prevents disease and produces safer food. Because antibiotics have been used in humans for more than 60 years and in livestock for about 50 years, if there was going to be an epidemic of resistance related to antibiotic use in agriculture, it would have occurred by now. The fact that it has not means that antibiotic use in animals is not a major risk to human health.

Myth: The impact of antibiotic use on farms also can be felt through the environment (e.g., water runoff and air transmission).

Dr. Hurd: There is no evidence to support these routes contribute to the human health risk from antimicrobial resistance. Environmental spread of pathogens and resistance has long been of interest to farmers and the pork industry. Resources, including funding research, have been dedicated to gaining more understanding and knowledge in this area.

Myth: Antibiotic use on farms in Denmark are used sparingly and only when animals are sick.

Dr. Hurd: That is true. So sparingly, in fact, that farmers and veterinarians are not even allowed to use antibiotics to prevent common illnesses they know are coming and will make their animals sick. According to the World Health Organization (WHO), the Danish Pilot Program resulted in an increase in diarrhea in pigs and a 25 percent increase in deaths. The number of farms went from 25,000 in 1995 to fewer than 10,000 in 2005. What appeared to be a ban on antibiotic use in healthy pigs actually pointed out the benefits of its use in helping pigs grow in a healthy way.