

U.S. Pork Industry Husbandry Practices

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The National Pork Producers Council is one of the largest commodity organizations in the nation. Headquartered in Des Moines, Iowa, with an office in Washington, DC, the Council works to build a strong and vital pork industry by solving problems efficiently for the nation's pork producers. With approximately 85,000 producer members in 44 affiliated state associations, NPPC draws its strength from the nation's grassroots pork producers. Every producer, regardless of production size, has a voice in policy-making through a state-elected delegate system. The pork industry is the fourth largest agricultural sector in this country, generating approximately \$11.0 billion in annual farm gate sales, while creating an estimated \$66.0 billion in economic activity and employing 764,000 people.

The pork industry continues to change. In modern pork production, the emphasis is on efficiency of production. Between 1950 and today, USDA data shows the number of U.S. pork producers have fallen from over 5 million to about 180,000 in 1995. As the number of producers has decreased, production has been shifting to larger operations. About 80% of the 92 million market hogs raised in the U.S. is under the control of 20% of the producers. As the evolution of the industry continues the emphasis will remain on the business of pork production. To keep providing the consumer a quality product at a competitive price, producers have to be aware of the costs of production and return on investment.

In 1989, NPPC introduced the Pork Quality Assurance Program. Based on the Hazard Analysis and Critical Control Point system, the PQA Program works with veterinarians, ag extension personnel, and ag educators to give producers the latest information about animal health products and their correct use within a production system. The philosophy was that, with the proper educational effort, U.S. producers could confront violative drug residues and ensure the consumer and the government these products could be used responsibly and reasonably.

There are ten Good Production Practices (GPPs) described in the PQA Program. The first five mimic the FDA's Compliance Policy Guide 7125.37, "Proper Drug Use and Residue Avoidance by Non-veterinarians". The rest of the GPPs help the producer examine the production system to

identify ways to decrease the need for antimicrobials by maintaining the herd's health. With almost 21,000 producers who are responsible for over 75% of the nation's 92 million marketed pigs completing the program, it is a good outline for a discussion of the modern pork producer.

GPP #1: Identify and Track all Treated Animals

Breeding stock are commonly individually identified. This enables the producer to connect the parent with the growth and production of offspring. Knowing the lineage of the stock assists in breeding stock replacement selection or adjustment of the breeding program to produce the product the market wants. When treatment of disease is necessary individuals, pens, groups, or even barns are identified to help with medication decisions and assure animals aren't marketed during the prescribed withdrawal time if applicable.

GPP #2: Maintain Medication and Treatment Records

Writing down the planned use of antimicrobials or other medications gives the producer an organized plan. This helps find places where products may need to be changed or may no longer be needed.

GPP #3: Properly Store, Label and Account for all Drug Products and Medicated Feeds

Pork producers realize the importance of maintaining the efficacy of their animal health products. They know that they must be stored properly and used correctly. Most producers will have a drug storage system that includes maintaining a refrigerator and storage facilities.

GPP #4: Obtain and Use Veterinary Prescription Drugs Only Based on a Valid Veterinarian/Client/Patient Relationship

The VCPR is the cornerstone for the use of antimicrobials by the producer. Products are available either over-the-counter, by veterinary prescription, or by a Veterinary Feed Directive. The producer has an economical interest to minimize the use of antimicrobials because they are an added cost of production. With narrow margins the producer does not want to use any product that will unnecessarily decrease the chances of making a profit. For this reason you won't see a food producer solicit a veterinarian for a particular antibiotic treatment during a disease situation or use an over-the-counter antibiotic in the feed without a clear cost-benefit advantage. As part of their decision process, the veterinarian and producer consider the costs of the treatment. The antibiotic itself costs something to buy. There is also a cost of delivery that includes a labor cost, whether the treatment is given by injection, water, or feed. These costs and the likely outcomes

and ramifications of treatment, such as withdrawal times that have to be observed before marketing, can significantly affect the economics of treatment. All are discussed to arrive at the protocol that has the greatest probability for success and the smallest cost compared to benefit.

GPP #5: Educate All Employees and Family Members on Proper Administration Techniques and Withdrawal Times

Increased size and complexity of the production unit means that there are often multiple people responsible for the care of the pigs. There may be different employees or family members responsible for different phases of production.

GPP #6: Use Drug Residue Tests When Appropriate

Producing what the customer wants is the goal of modern pork production. Though a product may be acceptable in one market it may not be acceptable in another. Paying attention to this type of detail is enabling the industry to export about 5% of its production when just a few years ago the U.S. was a net pork importer.

GPP #7: Establish an Efficient and Effective Herd Health Management Plan

The definition of "Herd Health" may differ with different producers. The philosophy is to match the production system's individual herd health goals with the goals of the operation. For example maintaining herd health for a seed stock producer may be different from the herd health goals of a commercial finisher. The greatest changes in the industry during the last 3 to 5 years has been in the area of biosecurity. Producers have learned that keeping a building, a building site, or a phase of production biosecure can help decrease illness, decrease the use of antimicrobials and increase production while minimizing production costs.

GPP #8: Provide Proper Swine Care

Each pork producer's professional judgment, experience, and training are the key factors in providing animal care. Proper animal care consists of the interaction between the producer, the producer's management skills, the physical environment, and the pigs. Management practices that incorporate good swine care are generally also the most effective for production purposes.

GPP #9: Follow Appropriate On-Farm Processing and Commercial Feed Processor Procedures

Good Manufacturing Practices are guidelines that help prevent feed contamination and provide reasonable assurances that the feed was manufactured accurately. Even though in larger operations mixing feed is specialized enough that it may be done off-site, about 80% of operations mix at least one diet on the farm. Feed costs are approximately 60-70 percent of the cost of production. As more research has given better information about the nutritional needs of pigs diets have become more specialized. Now phase feeding, matching the diet with the growth phase of the pig, and split-sex feeding, feeding gilts different than barrows, are becoming the industry standard.

GPP #10: Complete Quality Assurance Checklist Annually, and Recertify Every Two Years
With the rapid changes taking place in the industry, it is important for the producer to be up-to-date on the latest information and technology available. This is the reason the PQA Program calls for at least a yearly meeting between the producer and the verifier. In reality, however today's producer has contact with their veterinarian much more often. It is not unusual for there to be monthly herd health consultation visits and other visits more often if due to production or health issues.

In conclusion I would like to emphasize three points. First, the pork producers that supply us with food are increasingly being differentiated from those people that sell pigs. They are no longer selling their animals to the processor but are now recognizing that they are supplying a product to meet the demands of the consumer and this philosophy will certainly increase as the HACCP plans of the packers come into place.

Second, veterinarians, physicians and their clients and patients have to share in the responsibility to properly use the antimicrobial products that play such an important role in food safety and human and animal health. No one can dispute that resistance to antimicrobials develops with use. There are many questions yet to be answered about the relative role of agricultural uses in the development of resistance that is of importance in human medicine. To help gather information about antimicrobial uses during pork production, NPPC and the American Association of Swine Practitioners have formed a Pharmaceutical Issues Task Force. The objectives of the group are to review the knowledge with regard to known and potential medical consequences of the use of antimicrobial drugs in pork animal production, to review the knowledge on known and potentially

efficient corrective and preventive action, and to develop a plan of action and recommend a sustainable position for the pork industry on the presenting pharmaceutical issues

Finally, pork producers and government agencies have enjoyed mutual respect for each other's professions and obligations. When asked questions about drug availability in the FDA, animal health in APHIS, or HACCP and food safety in the FSIS, the responses are consistently evaluated for their ability to be scientifically defensible using the best scientific techniques available today. The pork producers support and encourage a decision making process that is based on scientific fact instead of emotion or circumstantial evidence.

Evidence of this is the Pharmaceutical Issues Task Force that the National Pork Producers Council has formed with the cooperation of the American Association of Swine Practitioners. The Task Force members are pork producers, practicing veterinarians, and experts in epidemiology, pharmacology, food safety, veterinary microbiology, and antimicrobial resistance research. Its objectives are:

- to review the knowledge with regard to known and potential medical consequences of the use of antimicrobial drugs in pork animal production
- to review the knowledge on known and potentially efficient corrective and preventive action
- to develop a plan of action and recommend a sustainable position for the pork industry on the presenting pharmaceutical issues.

The Task Force is in the process of gathering information from a variety of sources and discussing how the pork production industry can address the issues surrounding antimicrobial resistance.