

# *Assuring Quality Care for Animals*

Youth Food Animal Quality Assurance  
Curriculum Guide

*GPP #3: Use Antibiotics Responsibly*

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**THE OHIO STATE UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES



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## Introduction

*Assuring Quality Care for Animals* is a complement to the *Youth Food Animal Quality Assurance Curriculum Guide* reflecting the changes in the Good Production Practices. PowerPoint presentations complement each section to assist with instruction.

Using information in this resource should help youth understand how to provide a safe, wholesome food animal product preferred by consumers.

**Note – this curriculum alone does NOT certify youth for state-mandated quality assurance training. A County Coordinator or Assistant Instructor must certify youth.**

Additional resources and templates referenced in this document may be found at:  
<https://www.pork.org/pqa-plus-certification/>

## GPP#3

### ***Use Antibiotics Responsibly***

The responsible use of antibiotics assures that food animal producers deliver a safe, wholesome product to the retail case. Understanding what is acceptable and what is not will assure that your herd/flock health program will maintain efficiency of production without over use of antibiotics. Using your established VCPR as intended will assure that you use antibiotics when needed meeting the labeled duration and dosage resulting in a healthy animal. The following chapter will address antibiotic usage in food animal production treatment and efficiency of production.

#### **KEY TERMS:**

Antibiotics  
Medication  
Antibiotic resistance  
Withdrawal time

## **ANTIBIOTICS IN FOOD ANIMAL PRODUCTION**

**Food animal producers use antibiotics for the following three purposes:**

- ◆ To treat animals for clinical illness administered through:
  - Injections (IM, SubQ or IV)
  - Orally in feed or in water
- ◆ Antibiotics are used as sub-therapeutic doses, administered in the feed or water, as a preventative in animals that:
  - Have been or are currently exposed to infections (bacterial), or;
  - If there is a clinical outbreak pattern of disease in operations at a given time of year or a given production stage

## **PRINCIPLES AND GUIDELINES FOR RESPONSIBLE ANTIBIOTIC USE**

**Five principles to guide food animal producers so they will use antibiotics responsibly assuring a safe wholesome food product for consumers (adapted from the National Pork Board PQA Plus Youth Guide):**

### ***I. Take appropriate steps to decrease the need for the application of antibiotics considering all alternatives***

Working with your veterinarian through your established VCPR you should develop a comprehensive herd/flock health plan. This is key to maintaining the health and productivity of your project animal. A healthy herd/flock will reduce the need for excessive antibiotic use. By preventing disease through appropriate animal management, sanitation, biosecurity, health monitoring, and vaccination you will decrease the use of antibiotics.

### ***II. Assess the advantages and disadvantages of all uses of antibiotics***

You should know when to use antibiotics and when you should not. This can be determined by assessing the advantages and disadvantages of all uses of antibiotics. A producer should take into consideration animal health, welfare, environmental impact, and food safety implications of antibiotic use. The use of antibiotics could result in bacterial resistance if they are not used properly. This could have a human health impact and affect the public image of the food animal industry. In some situations a change in management or handling could result in a healthier environment for the animal and could correct the health condition in question. If you typically head for the medicine bottle each time there is a potential health concern: STOP and THINK – are there other alternatives?

If an antibiotic is necessary:

- ✓ Antibiotic use should be minimized by treating only for as long as needed for the desired response to the infection:
  - Using the antibiotic label to determine dose (amount and frequency) and duration (treatment time) is key to proper antibiotic use;
  - Extra-label use of an antibiotic is legal if prescribed by your veterinarian whom you have a VCPR established with, and as outlined in the Animal Medicinal Drug Use Clarification Act. Remember that it is illegal for anyone, including a veterinarian, to use a medicated feed in any other way than intended; and
  - Remember that your veterinarian should be your first point of contact if you are unsure if you should or should not use an antibiotic.
- ✓ In some cases there may be a need for preventative antibiotic therapy which will need to be assessed regularly:
  - Food animal drugs are approved by the Food and Drug Administration (FDA) based on human, environmental and animal safety

- FDA also considers the potential for antibiotic resistant bacteria prior to approval
- Measurable benefits such as reduced death, illness, and improved animal welfare are a result of appropriate treatment and disease prevention.
- Niche' markets (all natural, organic, free range, etc.) may have limitations to the products you can use. Be sure that if you are providing product for those markets you keep in mind animal welfare, management and alternative markets for those food animals you may need to treat in a conventional manner.

**III. Use antibiotics only when they provide measurable benefits for the health and welfare of the animal**

- ✓ Evaluate antibiotic use in your animals and determine the measurable benefits of all antibiotics:
  - FDA approves products based on their safety (human, animal, and environmental) and efficacy
  - Mortality, morbidity and improved welfare of the animals in your flock or herd through disease prevention and treatment are benefits that can be measured

**IV. Implement management practices described for responsible use of animal health products into your daily routine**

- ✓ **“Assuring Quality Care for Animals”** in Ohio and implementing the Good Production Practices will result in you providing a safe and wholesome food animal product to your consumer. This program is recognized as a symbol for youth education in food safety as well as animal welfare, care and management. Implementing the GPP’s will result in being confident that you have the tools to know when and when not to use antibiotics, and that you have produced a food animal product that has no violative drug residue.  
**A violative drug residue is not the same as antibiotic resistance and both should be taken seriously.**
- ✓ Keeping accurate records will reduce the chance for a mistake resulting in violative drug residue.
- ✓ Understanding how withdrawal times work in order to reduce the chance for a residue is key to a successful herd/flock health management plan.

- ✓ Verification of all actions in the barn is critical to you knowing that you have provided a consumer with a safe wholesome food product as a result of proper management.

**V. Follow the responsible antibiotic use guidelines and maintain a current veterinarian/client/patient relationship (VCPR)**

- ✓ Utilize your established VCPR for all decisions on antibiotic use and herd/flock health as described in.
  - Extra-label drug use should be in accordance of requirements of your operations VCPR
  - It is illegal for anyone to use medicated feeds in an extra-label application
- ✓ Antibiotics should be used for treatment when there is an appropriate disease that needs to be treated. Look at management practices that may result in a reoccurring outbreak (ventilation, dampness, sanitation, etc.)
- ✓ Once you have determined that antibiotics are the best course of action
  - Administer only when necessary
  - Give to the smallest amount of animals needing treatment
  - Assure you have given the antibiotic for the least amount of time to prevent reoccurrence of the disease
- ✓ Consult with your veterinarian on rare cases of diseases that are not improving after standard antibiotic application. Antibiotics used in treating antibiotic resistance infections in humans and animals should be carefully reviewed prior to use for a disease.
  - Talk with your veterinarian about antibiotic resistance
  - Work through your VCPR and determine which product choices to use
  - Use your written plan of action for use of antibiotics
- ✓ Remember that mixing together injectable or oral medications by a producer is illegal.
  - If this is done the efficacy of the medications as intended individually may change
  - This could also affect the withdrawal time, thus making it hard to know when you can market product from your food animal
- ✓ Take your environment into consideration when handling and disposing of all animal health products, antibiotics included.
  - Assure that food animal pharmaceuticals and medicated feeds are stored properly and are still within their expiration date
  - In the case of medicated feeds, be sure that scoops, troughs, buckets, etc., are cleaned properly after the medication course has been met, and that they are kept separate from non-medicated feeds to avoid cross contamination
  - Properly dispose of outdated or unused medication

## Use Antibiotics Responsibly Study Questions

1. What are three reasons why producers/exhibitors may use antibiotics?
2. What are three principles for responsible antibiotic use?
3. What are three guidelines for responsible antibiotic use?
4. What role does a VCPR play in antibiotic use?
5. What are three things a producer/exhibitor can do to minimize antibiotic use?
6. What are three things that need to be recorded when administering antibiotics?