



### PRUDENT ANTIMICROBIAL USE GUIDELINES FOR CATTLE

*The production of safe and wholesome beef and dairy products for human consumption is a primary goal of the AABP. In reaching that goal, the AABP is committed to disease prevention through management practices including the use of vaccines, parasiticides, stress reduction, management of the animal's environment, and proper nutritional management.*

The AABP recognizes that proper and timely management practices can reduce the occurrence of disease and therefore reduce the need for antimicrobials; however, antimicrobials remain a necessary tool to prevent, control and treat infectious disease in beef and dairy herds.

Prudent use of antimicrobials is encouraged in order to reduce animal pain and suffering, to protect the economic livelihood of beef and dairy producers, to ensure the continued production of safe and wholesome foods of animal origin, and to minimize the development of antibiotic resistance. Following are AABP's general guidelines for the prudent use of antimicrobials in beef and dairy cattle. Prudent use of antimicrobials is encouraged in order to reduce animal pain and suffering, to protect the economic livelihood of beef and dairy producers, to ensure the continued production of safe and wholesome foods of animal origin, and to minimize the shedding of zoonotic bacteria into the environment and potentially the food chain.

**1** The veterinarian's primary responsibility is to help design management, immunization, housing and nutritional programs that will aid in reducing the incidence of disease and, thereby, the need for antimicrobials.

**2** Antimicrobials should only be used within the confines of a valid veterinary-client-patient relationship; this includes both dispensing and issuance of prescriptions.

**3** Veterinarians should properly select and use antimicrobial drugs.

- The veterinarian should base actions and recommendations on strong clinical evidence of the identity of the pathogen causing the disease using clinical signs, history, necropsy examination, laboratory data and past experience.
- The antimicrobial selected should be appropriate for the target organism and should be administered at a dosage and route that are likely to achieve effective levels in the target organ.
- Product choices and regimens should be based on available laboratory and package insert information, additional data in the literature, and consideration of the pharmacokinetics and pharmacodynamics of the drug.
- Antimicrobials should be used to achieve case-specific clinical outcome(s) such as fever reduction, return of clinical signs to normal, or to reduce shedding, contagion and recurrence of disease.
- Periodically monitor herd response to mastitis therapy, especially for routine therapy such as dry cow intramammary antibiotics. This can include clinical response, records analysis, milk culture and, in some cases, monitoring herd antimicrobial susceptibility.
- Use products that have known efficacy *in vivo* against the pathogen causing the disease problem.



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- Antimicrobials should be used at a dosage appropriate for the condition treated for as short a period of time as reasonable
  - Antimicrobials labeled for use for treating the condition diagnosed should be used whenever possible. The label, dose, route, frequency and duration should be followed whenever possible.
  - Antimicrobials should be used in an extra-label manner only within the provisions of AMDUCA regulations.
  - Compounding of antimicrobials from bulk for use in cattle is not appropriate and is a risk for violative meat or milk residues and may result in a risk to animal health.
  - When medically appropriate and effective, local or regional therapy may be preferred over systemic therapy, in order to reduce the exposure of non-target bacteria to antibiotic pressure.
  - Treatment of chronic cases or those with a poor chance of recovery should be avoided. Chronic cases should be removed or isolated from the remainder of the herd.
  - Combination antimicrobial therapy should be discouraged unless there is information to show an increase in efficacy or suppression of resistance development.
  - The use of antimicrobials for prevention or control of disease should be based on a group, source or production unit evaluation by the herd veterinarian rather than being utilized as standard practice.
  - Drug integrity should be protected through proper handling, storage and observation of the expiration date.
- 4** Veterinarians should aspire to ensure proper on-farm drug use through oversight of all drugs used regardless of where the drug was purchased.
- Prescription or dispensed drug quantities should be appropriate to the production-unit size and expected need so that stockpiling of antimicrobials on the farm is avoided.
  - The veterinarian should train farm personnel who use antimicrobials on indications, dosages, withdrawal times, route of administration, injection site precautions, storage, handling, record keeping and accurate diagnosis of common diseases. The veterinarian should ensure that labels are accurate to instruct farm personnel on the correct use of antimicrobials.
  - Veterinarians are encouraged to provide written or computerized treatment protocols to clients to describe conditions, meat and milk withdrawal times and instructions for antimicrobial use on the farm or unit.
  - The veterinarian should regularly monitor antimicrobial use on the farm by reviewing treatment records, inventory and drug purchase history.
  - Veterinarians should participate in continuing education programs that address therapeutics and antimicrobial resistance. 