



# Judicious Antimicrobial Use Guidelines

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**Disease Prevention** — The best way to prevent antimicrobial resistance is by only using antibiotics when they are necessary. It is better to prevent disease than to treat it. Disease prevention may be achieved through good management practices — by emphasizing animal husbandry, biosecurity, and health maintenance. Appropriate and timely management practices include but are not limited to vaccinations, parasite control, stress reduction, nutritional management, and environmental management.

**Diagnose Sick Animals** — A farm with a lot of sick animals indicates a breakdown in preventive medicine practices. A good manager should be able to detect a sick animal early in the course of the disease. The later the diagnosis, the harder it is to treat the animal and the greater the likelihood that it will not survive. It is important to consult your veterinarian early as many diseases have very similar symptoms. It is often necessary to confirm a diagnosis with laboratory testing to insure that the proper antibiotic is used or if an antibiotic is even required. Some disease-causing agents, such as viruses, do not respond to antibiotics.

**Be Proactive** — The majority of Ohio dairy veterinarians questioned in a recent survey reported that only 25% of their dairy clients asked about antibiotic resistance without prompting (1). As producers, it is important to be aware of the potential for resistance developing from inappropriate use of antibiotics. Information is an impor-

tant resource and your veterinarian can provide you with written protocols for any antibiotics they may prescribe, and if they don't automatically provide them, you should ask for them.

**Prevention Is the Key** — Most of the veterinarians in the previously mentioned survey agreed that the emergence of antibiotic resistance will have negative consequences on animal health. They also agreed that antibiotic use in dairy cows without consulting a veterinarian may contribute to antibiotic resistance. Many producers treat illnesses on their farms with antibiotics without consulting a veterinarian. This is not a good practice because it may lead to the use of the wrong drug, the wrong dosage, the wrong treatment period, and the wrong withdrawal time. All of these factors can lead to the development of antibiotic resistance.

**Veterinarian-Client-Patient Relationship** — The take-home message is that producers should not be treating animals with antibiotics without first consulting a veterinarian. Establishing a Veterinarian-Client-Patient relationship is a first line of defense against the development of antibiotic resistance.

## Reference

- (1) Cattaneo, A., Wilson, R., Doohan, D., and Lejeune, J. (In Press). Veterinarians knowledge, beliefs and practices regarding antibiotic resistance on Ohio dairy farms. *J. Dairy Sci.*

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