

Proper Dosing Helps Keep Costs in Line

“Cattle producers pay a price for using a standard dose of anti-infective on a lot of cattle, in more ways than one,” says Mike Nichols, DVM, Pfizer Animal Health Veterinary Operations, Vega, Texas.

While overdosing results in unnecessary treatment costs and increased withdrawal time, underdosing can result in increased treatment failures (leading to more chronics and mortalities), added labor and treatment costs, reduced performance, and increased withdrawal times as well. All of those consequences affect cattle producers’ bottom lines.

Nichols says improper dosing happens for typically two reasons. Producers may administer a standard dose for all animals that appear to be in a certain weight range, such as one standard dose for all 300-lb. to 500-lb. calves. Or, producers may give a standard dose to an entire group of animals based on their average weight.



“I allow for a 10% variance either over or under the exact dose to still be considered a proper dose,” he says. “But if you consider the weight variation in a typical group of calves, it wouldn’t be surprising if you’re improperly dosing up to 50% of the animals.”

A Kansas State University (K-State) analysis was conducted to evaluate the extent and degree of improper dosing that would occur if all animals in a study group were treated with one standard dose based on the average weight of the group. The researchers found that 946 out of 6,231 head would be overdosed by 10% or more, while 831 head would be underdosed by 10% or more. The analysis also showed that nearly 2% of the animals would be overdosed by 25% or more.

“Unlike vaccines, which are dosed at one standard rate to stimulate the immune system, anti-infectives must be dosed on

weight to ensure the proper level of drug reaches the infected tissues in an animal’s body for effective treatment,” Nichols adds.

Tips to ensure proper dosing

Nichols recommends installing a weight scale under the processing chute as a foolproof way to ensure proper dosing. “It is an investment, but one that can help yield improved treatment response and lower total medicine costs, as well as being a valuable tool to assess treatment response,” Nichols explains. “Weighing and dosing animals individually also results in correct withdrawal times, which supports Beef Quality Assurance (BQA) guidelines.”

Educating the people who are administering the products is critical. Crews should be trained in using the proper size syringe to accurately measure the dose, following the proper care of administration equipment and handling of the chute scale if you have one.



“The newer, low-volume dose anti-infectives on the market offer many benefits including supporting BQA, but they still require attention to detail for administering the correct dose,” Nichols adds. “Crew training is even more important with these products. Producers should also consider that several manufacturers have produced syringes specifically to handle these lower doses.” **HW**

Editor’s Note: This article was provided by Pfizer Animal Health.