

A Survey of Dairy Farm Treatment Practices on Midwest Dairy Farms

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Patrick J. Gorden, Senior Clinician¹;
Cassandra Rice, Student²;
Adlai Schuler, Student²;

Veterinary Diagnostic and Production Animal Medicine,
²College of Veterinary Medicine,
Iowa State University

Summary and Implications

Judicious antimicrobial use and antimicrobial stewardship have become buzzwords in production animal agriculture over the last few years. While these words are becoming expectations in the industry, very little is understood about their true meaning and the level of implementation of judicious use practices on dairy farms. We conducted an investigation on 85 dairy farms in the Midwest to document drug use practices on these farms. Our results indicate that most farms are doing an adequate job of implementing judicious practices, but there is room for improvement to meet expectations of regulatory officials and consumers.

Introduction

Over the last several years, the use of the phrases “judicious antimicrobial use” and “antimicrobial stewardship” have become commonplace in the veterinary and lay literature. Many restaurant chains and grocery purveyors have implemented position statements limiting or eliminating the use of antimicrobials in production systems that supply meat and dairy products to their operations. In 2015, US companies like Walmart, Subway, and McDonalds have announced new positions on responsible use of antibiotics in farm animals, in an attempt to continuously improve the sustainability of the items they sell.

While this is just one example of changes that farmers will be asked to undertake in their production systems, it clearly provides a benchmark for the industry to work toward. Currently, there is very little data available regarding the status of judicious antimicrobial practices on US farms, including dairy farms. In addition, there is little accurate data available on the amount of antimicrobials used by the dairy industry and how these are used for the treatment of disease.

In an attempt to collect some data to assess the current drug usage practices in the Midwest dairy industry, Iowa State University’s College of Veterinary Medicine developed a summer internship program, sponsored by Zoetis, where two veterinary students visited dairy

operations and interviewed dairy farmers to collect such data. The objectives of the summer project were to:

- assess the treatment practices for common diseases - mastitis, metritis, pneumonia, lameness, heifer pneumonia, and heifer diarrhea;
- determine veterinary involvement in common treatment practices on dairy farms; and
- assess the level of record keeping relating to farm treatments initiated by farm personnel.

Materials and Methods

We enlisted the assistance of fourteen veterinarians or veterinary practices from IA (5), MN (3), WI (3), SD (1), IL (1), and NE (1) to identify dairy farms within their practice area that would allow the interns to visit their dairy operation and evaluate their treatment practices, treatment protocols, and treatment records. During the summer of 2015, the interns visited 85 dairy cattle operations, all of which had lactating cows with the exception of two calf ranches that custom raised dairy replacement heifers. The farms were located in IA (30), MN (24), WI (19), SD (6), IL (5), and NE (1). In total, the farms had 87,262 lactating cows (avg. herd size=1051 [range 105-5400]), most with replacement heifers on site.

The interns used a standard investigation form to evaluate each farm and assist in consistent data collection. Additionally, they collected any examples of treatment protocols on the farm, along with any other pertinent documentation (images of paper records, unique veterinary labels, etc). In order to minimize ambiguity related to disease diagnosis and definition between farms, we concentrated only on common diseases, which we felt were commonly diagnosed and likely had clear disease definitions. These included mastitis, metritis, pneumonia, lameness, heifer pneumonia, and heifer diarrhea.

Results and Discussion

At this time we are still summarizing all of the data collected. All but three of the farms evaluated kept some form of treatment records. Seventy-six farms kept at least some of their records on paper while 54 farms kept varying degrees of records within their farm’s computer management software. Veterinary treatment protocols on the farms that we visited were also extremely variable. When asked about the presence of protocols, most farms responded that they had them but many could not produce them.

Our results indicated that extra-label drug use was utilized on 83 of the 85 farms we visited. While the vast majority of this was done within the legal confines of the Animal Medical Drug Use Clarification Act (21CFR520),

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there were some instances where illegal practices were noted. Some of these issues are likely due to a misunderstanding about allowable extra-label drug use practices. All in all, it appears that most farms are doing a decent job with antimicrobial stewardship but there is some improvement that needs to be implemented to keep up with demands of regulatory officials and consumers.