

## Highlights of NAHMS Dairy 2002 Part IV: Antimicrobial Use on U.S. Dairy Operations, 2002

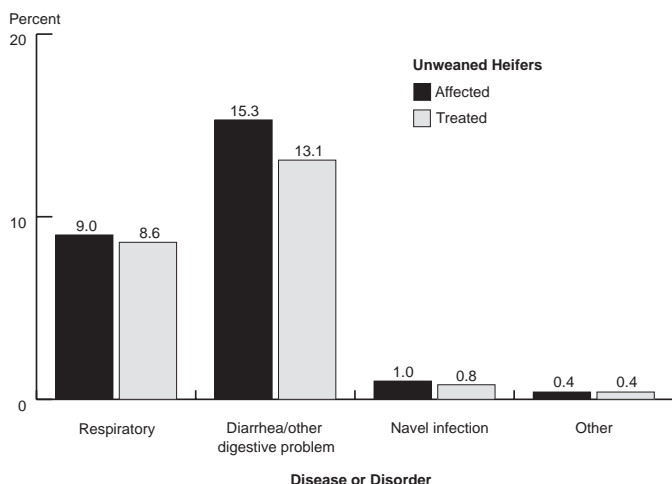
In 2002, the National Animal Health Monitoring System (NAHMS) conducted a study of dairy operations in the United States. The Dairy 2002 study was conducted in 21 major dairy States\* and was designed to provide information to both participants and industry from operations representing 83.0 percent of U.S. dairy operations and 85.7 percent of U.S. dairy cows. Data were collected between February 25, 2002, and January 9, 2003.

The following are highlights excerpted from Part IV of the NAHMS Dairy 2002 study: Antimicrobial Use on U.S. Dairy Operations, 2002. Released in September 2005, this report provides national estimates of antimicrobial use on U.S. dairies based on data collected during the Dairy 2002 study.

### Unweaned Dairy Heifers

- A higher percentage of unweaned heifers were affected by diarrhea/digestive problems than respiratory disease (15.3 percent and 9.0 percent, respectively) (Figure 1). However, a higher percentage of unweaned heifers affected by respiratory disease received antimicrobial treatment than unweaned heifers affected by digestive problems (95.6 percent and 85.7 percent, respectively).

Figure 1. Percentage of All Unweaned Heifers Affected With the Following Diseases or Disorders, and Percentage of All Unweaned Heifers Treated With an Antimicrobial for the Diseases or Disorders



- Of the 8.6 percent of unweaned dairy heifers treated for respiratory disease, 29.3 percent were on operations where florfenicol was the primary antimicrobial used to treat respiratory disease. About one out of five unweaned heifers treated for respiratory disease (17.9 percent) were on operations where tetracyclines were the primary antimicrobial used to treat the disease.
- Of the 13.1 percent of unweaned heifers treated for diarrhea or other digestive ailments, the primary antimicrobials used were sulfonamides (23.8 percent) and tetracyclines (21.9 percent).

### Weaned Dairy Heifers

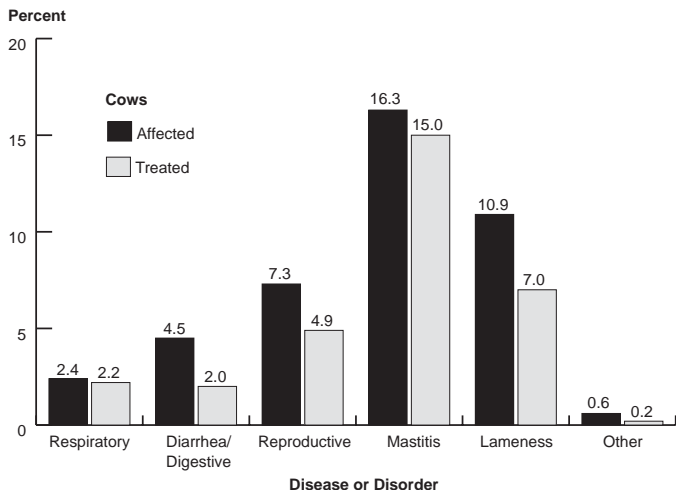
- Diseases and disorders occurred infrequently in weaned heifers—only 4.7 percent were affected with respiratory disease, 0.8 percent with diarrhea or other digestive problems, and 1.5 percent with other ailments. Nearly all heifers affected with respiratory disease (97.5 percent or 4.6 percent of all weaned dairy heifers) were treated with antimicrobials, and about half affected with digestive problems (50.7 percent or 0.4 percent of all weaned heifers) were treated with antimicrobials.
- Of the 4.6 percent of weaned dairy heifers treated with antimicrobials for respiratory disease, approximately 3 out of 10 (34.3 percent) were on operations where tetracyclines were the primary antimicrobial used to treat respiratory disease, and one out of four (26.4 percent) were on operations where florfenicol was the primary antimicrobial used. Of the 0.4 percent of weaned heifers treated for digestive disorders, 54.3 percent were on operations that primarily used cephalosporins to treat digestive disorders.

### Cows

- Mastitis and lameness were the most common diseases or disorders affecting dairy cows (16.3 percent and 10.9 percent, respectively) (figure 2). Of cows affected with mastitis, 91.9 percent were treated with an antimicrobial. Of cows affected with lameness, 64.9 percent were treated with an antimicrobial.

\*California, Colorado, Florida, Idaho, Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, New Mexico, New York, Ohio, Pennsylvania, Tennessee, Texas, Vermont, Virginia, Washington, Wisconsin

**Figure 2. Percentage of All Cows Affected With the Following Diseases or Disorders, and Percentage of All Cows Treated With an Antimicrobial for the Diseases or Disorders**



- Of the 15.0 percent of cows treated for mastitis, 55.1 percent were on operations where beta-lactams were the primary antimicrobials used to treat mastitis, and 36.8 percent were on operations where cephalosporins were the primary antimicrobial used. Of the 7.0 percent of cows treated for lameness, beta-lactams, cephalosporins, and tetracyclines (17.3 percent, 29.8 percent and 42.4 percent, respectively) were the most common antimicrobials used.

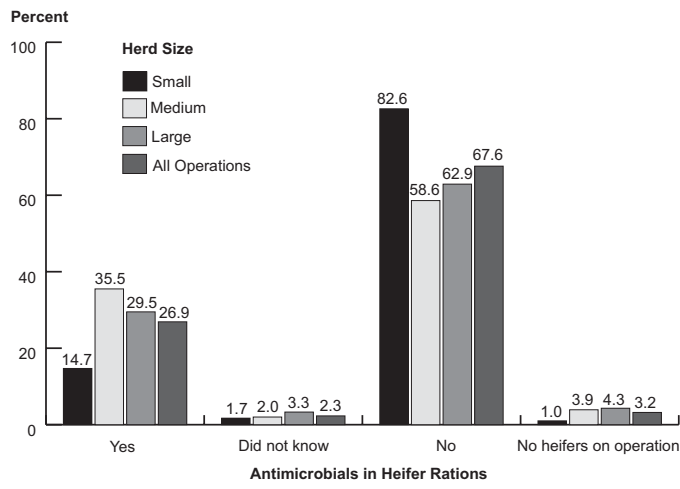
### Medicated Milk Replacer

- A higher percentage of large operations (500 or more cows)—compared to small operations (less than 100 cows) and medium operations (100 to 499 cows)—did not feed medicated milk replacer to unweaned heifers (62.3, 45.6, and 35.9 percent of operations, respectively). Almost half of unweaned heifers (49.2 percent) did not receive medicated milk replacer. When unweaned dairy heifers were fed medicated milk replacer (50.8 percent of all unweaned heifers), oxytetracycline with neomycin was the most common medication used in the milk replacer (23.5 percent of all unweaned heifers).

### Disease Prevention and Growth Promotion

- Approximately one out of four weaned dairy heifers (26.9 percent) received antimicrobials in heifer rations. A higher percentage of heifers on medium and large operations (35.5 percent, 29.5 percent, respectively) were fed antimicrobials in their rations compared to weaned heifers on small operations (14.7 percent) (figure 3).

**Figure 3. Percentage of Weaned Heifers, by Operations' Use of Antimicrobials in Rations for Disease Prevention or Growth Promotion, and by Herd Size**



- Of the 26.9 percent of weaned dairy heifers that received antimicrobials in rations, most (70.4 percent) received chlortetracycline. Sulfamethazine and oxytetracycline were fed to 32.5 percent and 22.4 percent of weaned dairy heifers.

For more information, contact:

USDA:APHIS:VS:CEAH  
 NRR Building B, M.S. 2E7  
 2150 Centre Avenue  
 Fort Collins, CO 80526-8117  
 970.494.7000  
 E-mail: [NCAHsweb@aphis.usda.gov](mailto:NCAHsweb@aphis.usda.gov)  
[www.aphis.usda.gov/vs/ceah/ncahs](http://www.aphis.usda.gov/vs/ceah/ncahs)  
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