



United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

Veterinary
Services

Impacts of the NAHMS

National Dairy Heifer Evaluation Project

Since the first National Dairy Heifer Evaluation Project (NDHEP) results were released in the spring of 1993, the industry has applied the information to prepare for emerging issues and improve production through education and clarifying research needs.

This National Animal Health Monitoring System (NAHMS) study was a cooperative effort of state agricultural departments; universities; and the following USDA agencies: the Cooperative Extension Service (CES), National Agricultural Statistics Service (NASS), and Animal and Plant Health Inspection Service (APHIS). The NDHEP described heifer health and management on 78 percent of U.S. dairy farms.

Industry Preparedness:

Through NDHEP 1991-92 baseline information, the dairy industry has a measure by which to gauge future U.S. heifer health, infection, and management status and identify emerging issues.

The NDHEP provided national estimates of 1991-92 prevalences of Escherichia coli 0157:H7, Salmonella, and Cryptosporidium in dairy heifers.

- Information on prevalence of Cryptosporidium parvum and shedding by calf age was available to officials and the public to answer concerns during a nationally-publicized, spring 1993 outbreak of related human illness in Milwaukee, Wisconsin.
- That same winter, another outbreak of human illness was reported in the Pacific Northwest, this time

related to Escherichia coli 0157:H7. NDHEP information on the bacteria's prevalence in dairy cattle helped officials define public risks and research needs.

- NDHEP results of Salmonella incidence in dairy cattle have helped officials and researchers in food safety and animal health pinpoint areas of further investigation and research.

In mid-1994, cases of acute bovine viral diarrhea surfaced in the U.S. following a 1993 outbreak in Canada. NDHEP information on producer vaccination and biosecurity practices helped officials address risk of disease spread and target educational efforts on vaccination protocols.

Moving Forward:

NDHEP results identified opportunity areas for dairy producers and veterinarians to improve neonatal heifer management. For example:

- One-third of U.S. producers reported allowing calves to receive first colostrum via nursing, a method less likely to ensure adequate colostrum intake than delivery via a bucket or bottle. Forty percent of dairy calves at 24 to 48 hours of age had immunoglobulin levels less than 1,000 mg/dl, a level often inadequate to ward off disease.
- More than 20 percent of U.S. dairy operations reported an average weaning age greater than 10

weeks of age. Many producers could lower weaning age below the national average of 8 weeks to save feed costs.

- Only 53 percent of producers reported providing ad libitum water within the first 2 weeks of their calves' lives, while 89 percent fed grain in that period. However, water intake stimulates grain intake which can allow earlier weaning and reduce feed costs.

Availability of information on dairy management practices has contributed to research efforts to identify management factors related to Cryptosporidia, Salmonella, and E. coli 0157 shedding and mortality in dairy cattle.

Industry members have tapped the NDHEP data base for information relating to disease incidence, changes in diseases and trends, risk factors for various diseases, and planning for outreach activities.

Existing data, such as the NDHEP results, have helped target additional research efforts, such as E. coli 0157:H7 studies at the University of Georgia and Washington State University.

Education:

From its inception, the study provided participating producers and their herd veterinarians with opportunities to learn about improving heifer health and production. Seventy-four percent of the producers directly involved in the NDHEP reported they benefited personally from study participation. Fifty-seven percent had already made operation changes, and 62 percent were planning changes, at the time of the evaluation. Improving calf housing, bettering colostrum and milk replacer management practices, supplementing selenium, and enhancing record keeping were the most common changes reported.

This study was instrumental in bringing together private and public-practice veterinarians, dairy scientists, and members of the feed industry to provide producers with information regarding

recent changes in milk replacer formulation, such as use of protein sources other than casein which do not clot in the calf abomasum. Milk replacer and colostrum management guides were among the group's first products, and they have since broadened efforts to interpret other NDHEP results for producers.

A continually growing list of customers in dairy production and related services apply NDHEP results or in-house or customer education.

- As the study began, NDHEP training sessions and nonregulatory on-farm visits provided VS Veterinary Medical Officers and Animal Health Technicians with opportunities to expand their knowledge of the dairy industry, prepare for emerging issues, and improve interaction with producers.
- Land O' Lakes, IDEXX, and the Cooperative Extension Service are examples of organizations using the information to further training of their own representatives and increase service or effectiveness.
- Tuskegee, Auburn, and Colorado State are among the universities that use NAHMS materials in the classroom to train industry members of the future.

In 1996, the National Animal Health Monitoring System will begin its second national study of the dairy industry. "Dairy '96" will provide another snapshot of dairy health and production to reveal industry changes over the 5-year span between studies, then move in to concentrate on Johnes disease, Neospora abortion, digital dermatitis, and dairy quality management practices.

For more information on the NDHEP and the National Animal Health Monitoring System, contact:

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