



DAIRY '96 NEEDS ASSESSMENT

Issues Identified as Information Needs¹

A. Environment

1. Water quality
 - a. nitrogen, phosphorus, sulfates, sodium
 - b. pathogens
 - cryptosporidia
 - human <—> animal <—> environment
 - giardia
2. Air quality
 - a. methane
 - b. odor
3. Animal density
4. Neighbors
5. Waste management

B. Food safety/product wholesomeness

1. Pathogens in milk or meat
 - a. E coli O157:H7
 - b. Salmonella
2. Antibiotic residues
 - a. drug use - within/extra-label
 - b. withdrawal times
 - c. causes of residues
 - d. residue testing
3. HACCP
4. Milk inspections
 - a. adequacy

C. Animal welfare

1. Housing/environment
 - a. confinement
 - b. concrete exposure
 - c. freestalls
 - d. pasture usage
 - e. cow comfort

D. Animal production

1. Routine herd health management practices
 - a. nutritional
 - feed intake measurements (DMI)
 - feed bunk space

¹ This list is an example and not meant to be inclusive.

D. Animal production (continued)

- (a. nutritional, continued)
 - nutrient budgets
 - milk replacer use
 - water availability
 - b. housing
 - housing
 - bedding type
 - calf hutches
 - bedding use
 - c. records
 - identification
 - computer usage
 - d. vaccination
2. Culling/longevity
 - economics
 3. Profitability
 4. Breeding performance

E. Animal health

1. Selenium/vit E
2. Foot/leg problems
 - a. laminitis
 - b. warts (tetracycline-responsive foot lesions)
 - c. hoof trimming (who, when, how)
3. Mastitis
 - a. Milk somatic cell count
 - b. Bulk tank milk
 - Bacterial count
 - quantitative/qualitative (differential)
4. Reproduction
 - a. in-breeding
 - b. seasonal calving
 - c. heat detection methods/aids
 - d. estrus synchronization
 - e. conception — heat detection
 - relationship with facilities, cow comfort
 - f. milk urea nitrogen (MUN) tests
5. Health effects related to bST usage
6. Metabolic disease
 - a. rates
7. Bovine leukosis
 - national prevalence
8. Johnes disease



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The Making of a National Study:



In 1991, the USDA's National Animal Health Monitoring System (NAHMS) went to the source to identify the dairy industry's foremost informational needs. Industry representatives functioning as Advisory and Technical groups determined the primary focus of NAHMS first national study of dairy production and helped to define study objectives that propelled the 1991-92 NAHMS National Dairy Heifer Evaluation Project from an idea to reality.

NAHMS turned to industry members again in 1995 using a focus group approach for guidance in preparing for their second dairy study. Various resources, described below, contributed ideas through individual comments and group discussions.

- The **American Farm Bureau Federation Dairy Advisory Committee** was the first to serve as a NAHMS focus group with a discussion held in February 1995. Water quality, Johne's disease, and milk quality issues topped their list of informational topics needing national attention.
- A cross-disciplinary group of dairy specialists, the **Bovine Alliance for Management and Nutrition (BAMN)**, first convened in 1992 to assist in interpreting and disseminating results of the NAHMS National Dairy Heifer Evaluation Project. In March and April 1995, BAMN members representing the American Feed Industry Association, the American Dairy Science Association, and the American Association of Bovine Practitioners participated in an electronic discussion on priorities for the upcoming NAHMS study. Their information priorities began with cow metabolic diseases and food safety pathogens.
- The **USDA:Animal and Plant Health Inspection Service** focus group convened early in April 1995 to identify preferences for Dairy '96 objectives.

Representatives brought lists prioritized by personnel in each region. At the top of the final summarized objectives were regional prevalence of specific pathogens, management practices, and quality assurance.

- The Internet was the newest communication tool used during the Dairy '96 needs assessment. Although **Dairy-L** subscribers were the most varied audience to participate in a discussion, their list, summarized in April 1995, was brief: 1) Johne's disease, 2) animal well-being, 3) food safety issues, and 4) fresh cow metabolic diseases.
- The **National Milk Producer's Federation Disease Advisory Committee** aptly served as spokespersons for their membership as they urged NAHMS to address the most prevalent animal diseases creating economic hardship for dairy farmers. Prevalence of those diseases and related management practices were the first requests voiced in their April 1995 response, followed by biosecurity practices, food safety issues, and others.
- The **Council on Dairy Cattle Breeding** surveyed their member representatives on NAHMS' behalf. In general, their greatest concerns identified in April 1995 were digital dermatitis (hairy heel warts), Johne's disease, mastitis, and vaccination practices.
- Also in April, the **Livestock Conservation Institute (LCI)** Board issued a resolution supporting the NAHMS 1996 dairy study. Individual LCI members contributed comments to the needs assessment request, focusing on disease agents beginning with Salmonella and Johne's disease.

Dairy '96 Study Objectives

Following receipt of the above responses, the NAHMS national staff defined the purpose of Dairy '96 to be: to support the highest priority information needs of animal health officials, producer groups, and veterinary groups relative to the dairy industry.

To meet these informational needs, the study will have the following objectives:

1) **Estimate national and regional prevalence of specific pathogens in dairy cattle, including Mycobacterium paratuberculosis (Johne's disease), bovine leukosis virus, and Neospora sp.** A further objective is to provide information on factors associated with M. paratuberculosis in cattle to support the development of herd certification programs. The resulting information is intended to support preventive efforts directed towards these key bovine pathogens. Disease pathogens were identified as a priority by focus groups representing dairy producer groups, veterinary/dairy scientist groups, and USDA:APHIS.

2) **Describe baseline dairy cattle health and management practices used on U.S. dairy operations.** Aspects include assessment of baseline cattle health, health management practices, herd biosecurity practices, and cow culling management practices which will provide baseline estimates and trend analysis for the dairy industry. These topics were identified as a priority by focus groups representing dairy producer groups and USDA:APHIS.

3) **Describe management practices used to assure the production of quality dairy products on U.S. dairy operations.** NAHMS hopes to support on-going quality assurance efforts of the dairy industry as well as support efforts of the dairy industry in being responsive to consumer concerns relative to animal care practices. Focus groups representing dairy

producer groups, veterinary/dairy scientist groups, and USDA:APHIS identified quality assurance as a priority.

4) **Describe the incidence of digital dermatitis (hairy heel warts) on U.S. dairy operations.** A further objective is to provide information on factors associated with digital dermatitis to obtain a broad perspective of this emerging bovine pathogen which was identified as a priority by representatives of dairy producer groups.

5) **Evaluate factors related to Salmonella and E. coli 0157:H7 in dairy cattle** to support efforts of USDA and the dairy industry to enhance preharvest food safety by gaining a better understanding of the ecology of this pathogen on dairy operations. Food safety pathogens were identified as priorities by focus groups representing dairy producer groups, veterinary/dairy scientist groups, and the USDA.

6) **Provide a profile of animal waste handling systems used on U.S. dairy operations** to support efforts of the dairy industry in responding to concerns about animal and public health. This topic was identified as a priority by representatives of dairy producer groups.

Representatives of the National Agricultural Statistics Service (NASS) will begin contacting producers for the NAHMS Dairy '96 study in January 1996.

For more information, contact:

Centers for Epidemiology & Animal Health
USDA:APHIS:VS, Attn. NAHMS
2150 Centre Ave., Bldg. B, MS 2E7
Fort Collins, CO 80526-8117
(970) 494-7000
NAHMSweb@aphis.usda.gov