INFO SHEET

Veterinary Services

APHIS

United States Department of Agriculture

Animal and Plant Health Inspection Service

March 2000

Topics Identified for NAHMS Swine 2000

The USDA's National Animal Health Monitoring System (NAHMS) plans national studies of U.S. animal populations around key information gaps identified by people working in various aspects of the targeted industry.

NAHMS is a nonregulatory program that seeks to meet the needs of various livestock and poultry groups for animal health information at the national level. NAHMS obtained national snapshots of the U.S. pork industry through the 1990 National Swine Survey and the Swine '95 study. For a third study, the Swine 2000, representatives of producer and veterinary organizations, academia, state and federal government and private business participated in interviews and various focus groups to identify the topics of interest for the study. Since NAHMS is a ***voluntary*** program that relies on producers to provide data, concerns of individual producers and producers collectively were carefully considered to ensure they have incentives to participate in the NAHMS Swine 2000 study.

PRRS Mycoplasma SIV

Before concerns about pressing health issues can be addressed, researchers must assess the levels and impacts of infection within the population and identify factors associated with each pathogen. NAHMS often collects blood samples to obtain disease prevalence rates. By adding management data to the analyses, we can identify factors that affect the spread of disease along with good production and preventive practices that can help producers minimize the spread of disease on the farm.

- NAHMS Swine 2000 needs assessment efforts found that respiratory diseases are of greatest concern to pork producers and more knowledge on several key pathogens is needed. The Swine 2000 study will research respiratory diseases such as porcine reproduction and respiratory syndrome (PRRS), *Mycoplasma*, and swine influenza virus (SIV).

- Individual test results for PRRS will be returned to producers as a direct benefit for allowing blood samples to be taken from breeding sows and late finishers. Collectively, test results on these respiratory diseases will allow NAHMS to determine disease prevalence rates on a national basis.

Serum bank for the future

Through NAHMS' 1990 National Swine Survey and Swine '95 study, a serum bank was established at the National Veterinary Services Laboratories (NVSL) for collaborative projects. To date, researchers have used the serum bank to determine a baseline national prevalence of the PRRS virus, to further understand Trichinae and Toxoplasma infection in U.S. pigs, to measure the level of finishing hog and breeding animal exposure to *Lawsonia intracellularis*, and to research the natural history of emerging diseases, such as the new swine flu (swine influenza virus H3N2).

- Blood samples collected during the Swine 2000 study will add to the serum bank, thereby ensuring this resource is available for future national research on domestic swine diseases and emerging pathogens.

Salmonella Toxoplasma Yersinia

On-farm information about food-borne pathogens is of high interest to consumers, the pork industry, and various government agencies. Almost no information exists for some pathogens, while we know enough about others to begin planning voluntary certification programs. These planners need on-farm information to identify good production practices. By using such practices, producers can minimize risks associated with eating pork and maintain consumer confidence. Representatives of producer groups, veterinarians, academia, and the government requested that NAHMS find out: How many producers have adopted practices known to ensure safe pork? What effects have their efforts had on the food-borne pathogens in the U.S. swine population? What other practices can help minimize the spread of these pathogens?

- Swine 2000 will provide an industry score card on reduction of *Salmonella* on the farm since requirements for reducing this pathogen were implemented in the packing industry. The national prevalence of *Yersinia* is unknown, and a measure is needed. Toxoplasma was included in the study because the perception of this disease as a public health concern is increasing.

- Prevalence information on these pathogens will help advance cooperative disease control efforts, describe current use of good production practices that will enhance research on risk factors, and assist the industry in targeting producer education efforts to improve adoption of good production practices.

Antibiotic use

Information on antibiotic use is a priority for people working in pork production due to regulatory pressures and consumer demand. Knowledge of the level and pattern of antibiotic use, particularly for growth promotion, is critical to assess the pros and cons of antibiotic use on farm. Principles for judicious use of antibiotics have been identified to offset the associated risks.

- Swine 2000 will describe the adoption level of good production practices related to antibiotics. The study will also provide information on the decision-making process - who has the greatest influence regarding use of drugs and medications on the farm - an area which has changed drastically in the U.S. pork industry in recent years. Swine 2000 information related to antibiotics will assist industry and animal health officials in establishing judicious use campaigns and benefit public health.

Environmental issues

Nutrient management and odor reduction are both pressing issues for U.S. pork producers. NAHMS Swine 2000 results will assist national education programs and guide policy development with objective information on use of environmental practices.

- NAHMS will capture data on adoption of environmentally sound production practices related to nutrient management plans, manure storage and application, and carcass disposal. Also, NAHMS will describe how many operations use a host of odor-reduction technologies currently being researched which may lead to recommendations in areas such as diet manipulation, waste treatment, and facility modifications. Goals are to assess industry progress on environmental issues and target future efforts for developing guidelines and educational programs for producers.

Say YES to NAHMS Swine 2000!

In the spring of 2000, the National Agricultural Statistics Service (NASS) will contact eligible pork producers about participating in this NAHMS national study. NASS statistically selected swine operations to represent over 90 percent of the U.S. swine population on operations with a total inventory of 100 or more. This population is located in 17 states.[1]

NASS data collectors will begin interviews with producers in June 2000. At that time, full benefits will be discussed and producers will be offered the opportunity to participate in the biological sampling portion of the study.

As always, links between NAHMS data and the operations on which the data were collected are confidential and are not included in national data bases.

For more information on NAHMS swine studies:
Centers for Epidemiology and Animal Health
USDA:APHIS:VS, attn. NAHMS
555 South Howes
Fort Collins, CO 80521
(970) 490-8000 NAHMSweb@usda.gov
www.aphis.usda.gov/vs/ceah/cahm

#N329.0300

[1]Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, and Wisconsin.