

# FACTSHEET

## Veterinary Services

United States  
Department of  
Agriculture

Animal and  
Plant Health  
Inspection  
Service

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## Environmental Practices/Management by U.S. Pork Producers

Environmental management is an integral part of the pork production system. Key factors in the success of today's pork producers are management of manure, water, soil conservation, and air. **Manure management on pork operations has become recognized as a significant factor in protecting the natural environment and maintaining overall acceptance of pork.**

During the summer of 1995, the USDA's National Animal Health Monitoring System (NAHMS) contacted pork producers in 16 states<sup>1</sup> as part of the Swine '95 study. The herds in these states represented 91 percent of the United States hog inventory. Information collected during the study provided an overview of environmental practices by United States pork producers.

### Environmental Programs

Concerns or regulations about environmental quality led many producers to change or develop management schemes during the 5 years prior to the Swine '95 study. Nearly 21 percent of the producers stated they changed or developed manure management programs (Figure 1).

**Nearly 53 percent of producers that marketed 10,000 or more hogs from December 1, 1994, to May 31, 1995, changed their manure management, and 36.0 percent changed their dust control programs during the 5-year period.** Many of these operations also changed their programs for monitoring groundwater, surface water, and air quality (14.7, 18.8, and 9.8 percent, respectively). These changes and those shown for employee training programs

Figure 1

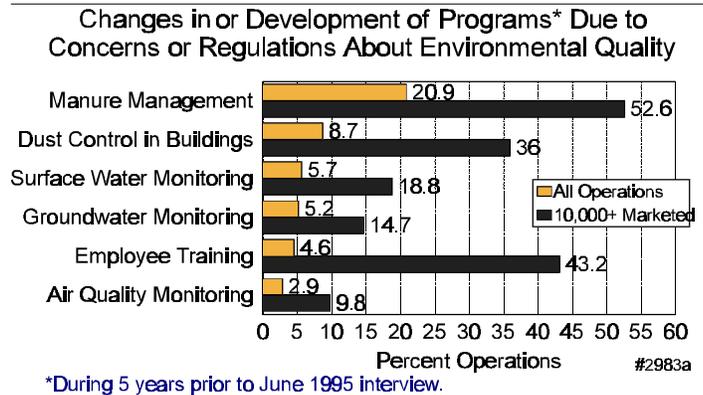
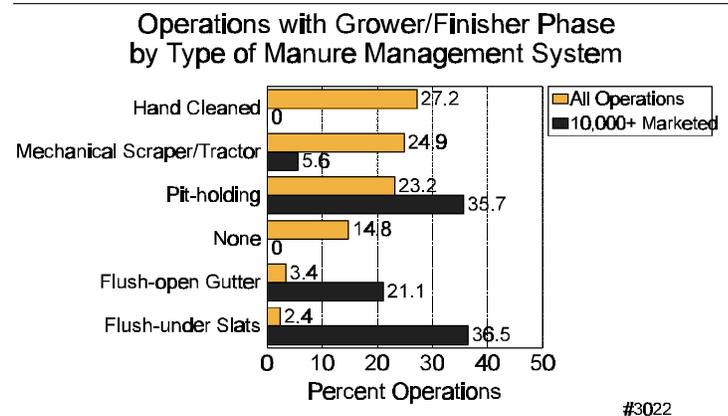


Figure 2



indicate a growing producer awareness of responsible environmental management.

### Manure Collection

The type of manure management system used most often depends on the size and type of facility on the farm. Hand cleaning was the most common method of manure management utilized in the grower/finisher phase of production (Figure 2). The same is true of operations with a

1 Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Pennsylvania, South Dakota, Tennessee, and Wisconsin.

farrowing phase. A mechanical scraper/tractor was the second most common system on operations with grower/finisher pigs. Pit-holding was used most commonly by operations in the nursery and was the second most common method used in the farrowing phase. In operations that marketed 10,000 or more head, pit holding and flushing were more common than scrapers or hand cleaning.

Fourteen percent of all operations reported no manure management system in their farrowing operation, and 4.0 percent reported none in the nursery. Nearly 15 percent of operations reported no manure management system in the grower/finisher phase. Of the latter operations, 85.9 percent had a total inventory of 600 pigs or fewer and housed grower/finisher pigs in facilities with access to lots or pastures. **Less than one percent of the operations with more than 2,500 pigs on inventory reported no manure management system used in the grower/finisher area.**

*The information presented below pertains to those producers who had 300 or more grower/finisher hogs, rather than all swine operations as previously discussed.*

### Manure Storage

Manure was stored by various means before application, and some producers used more than one system. Figure 3 shows that the below-floor slurry, or deep pit, method was used by 49.4 percent of operations. Over 20 percent of the grower/finisher operations used *uncovered* anaerobic lagoons, and 19.4 percent used *below-ground* slurry storage.

Most common among operations of *10,000 or more head marketed* were below-floor slurry pits (53.4 percent) and anaerobic lagoons without covers (76.2 percent.)

### Manure Disposal

Over 96 percent of grower/finisher operations did not separate manure for disposal.

Nearly 98 percent of operations with 300 or more grower/finisher hogs disposed of manure on land owned or rented by the operation. Just over 4 percent gave some away. Not quite 1.0 percent sold manure, and 0.5 percent paid someone to take it.

**When manure was disposed of on land owned or rented by the operation, 57.8 percent of these operations used a broadcast/solid spreader method of disposal** (Figure 4.) For slurry use, 46.0 percent used surface application methods and 21.9 percent subsurface application. Subsurface applications prevent environmental odor problems and are less likely to cause surface water contamination.

Figure 3

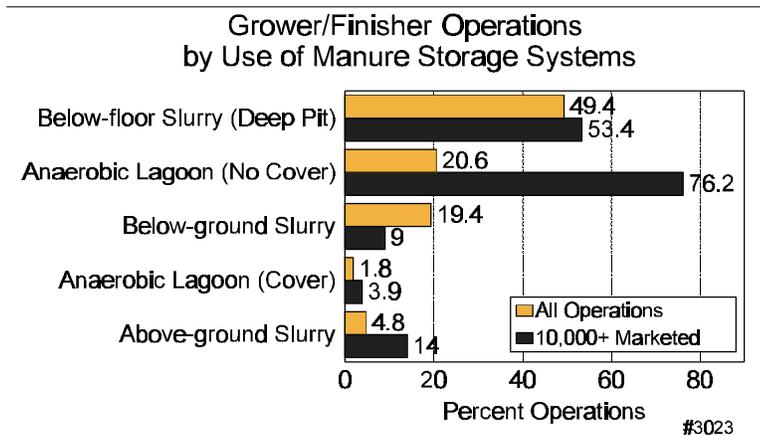
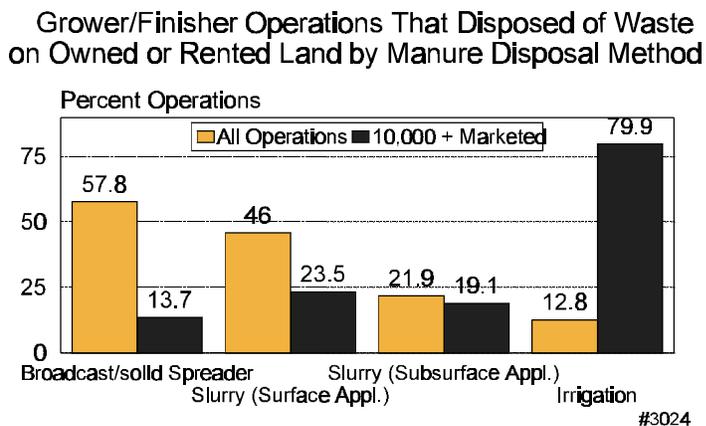


Figure 4



Operations with more than 10,000 pigs marketed were more likely to irrigate manure (79.9 percent) and less likely to broadcast with a spreader (13.7 percent).

The goal of most pork producers is an environmentally friendly method of manure management and disposal that retains valuable soil nutrients.

NAHMS collaborators on the Swine '95 study included the National Agricultural Statistics Service (USDA); State and Federal Veterinary Medical Officers and Animal Health Technicians; and the National Veterinary Services Laboratories (USDA:APHIS:VS).

Other information from the Swine '95 is available on biosecurity, vaccination practices, and antibiotic usage. For more information on these topics or the study in general, contact:

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