



# ERS *Report Summary*

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## Characteristics and Production Costs of U.S. Hog Farms, 2004

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The U.S. swine industry has undergone significant changes in the size and ownership structure of operations during the past two decades. Farm survey data on hog operations (locations with hogs) for 2004 reveal an industry characterized by wide variation in the types, sizes, and economic performance of operations. Once dominated by small, owner-operated crop-hog farms, hog ownership has become increasingly concentrated. The traditional approach of farrow-to-finish production, where all phases of production are performed on one operation, is being replaced by operations that specialize in a single production phase.

### *What Is the Issue?*

Changes in the structure and performance of hog operations have important implications for those associated with the industry. Hog producers continually face decisions about adjusting the size, organizational structure, and technological base of their operations to improve economic performance and farm viability. The restructuring in the hog industry has given rise to many concerns: environmental risks and nuisance effects from large hog operations, social implications of a declining rural population, and food safety, nutrition, and animal welfare concerns. Consequently, information about structural characteristics and economic relationships in hog production and what they suggest for the future of hog farming is needed.

### *What Are the Major Findings?*

A wide variation in the types, sizes, and economic performances of hog operations characterized the industry in 2004. Specialized farrowing, weanling, and hog finishing operations averaged nearly \$1 million or more of production value. By contrast, farrow-to-finish operations averaged about \$322,000 in production value per year.

Large specialized hog operations had been in business an average of no more than 13 years in 2004, compared with 20 years for the farrow-to-finish operations. The specialized operations also showed more recent investment in production facilities and equipment, and greater technical innovation, using such innovations as artificial insemination, terminal crossbreeding, and all-in/all-out management, than did farrow-to-finish operations.

Hog farms with the lowest costs of production in 2004 tended to be large, located in the Heartland, and operated by farmers whose primary occupation was farming. Performance indicators--such as pigs per litter, death loss, and feed and labor efficiency--were also better on low-cost operations. The better performance may be due to their greater use of improved technologies in such areas as breeding, feeding, and facilities management.

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Small and medium hog operations far outnumbered large and very large operations during 2004, but large and very large operations accounted for most of the production. The use of contracts for finishing hogs increased with size of the operation. Contracts were used by 75 percent or more of large and very large hog finishing operations compared with less than 50 percent of smaller operations. Operators of small and medium operations were generally older and more often reported plans to exit the hog industry in the next 5 years, suggesting that the trend toward fewer and larger operations will likely continue.

Most indicators of physical and economic performance improved as the size of operation increased. These differences may be partly due to less-than-full capacity utilization by small operations as well as to the superior technologies used on larger operations. Average production costs declined as the size of the hog operation increased, a result of spreading capital ownership costs over more units of production as well as more efficient input use.

Variation in production costs was most pronounced among the more diverse small operations, and fewer of these operations could cover their costs at a live market hog price of \$40 per hundredweight. Despite the higher average costs of small operations, several had costs competitive with those of larger operations.

Hog production was highly concentrated in the Heartland in 2004, but the largest operations were in the Southern Seaboard, where hog finishing operations averaged more than 12,000 head sold or removed per year. The larger hog finishing operations in the Southern Seaboard were more feed and labor efficient than those in other regions, but their production costs were higher than in the Heartland, where lower corn prices offset the better feed efficiency.

### *How Was the Study Conducted?*

This report uses data from an in-depth survey of U.S. hog producers in 2004 as part of USDA's annual Agricultural Resource Management Survey (ARMS). The survey collected information from a cross section of U.S. hog operations, including measures of size, production costs, business arrangements, production facilities and practices, and farm operator and financial characteristics. Surveyed farms were first divided into the types of producers common to the U.S. hog industry, and differences among the producer types were evaluated. Differences among farrow-to-finish and feeder pig-to-finish operations were explored in-depth. Data on structural and farm characteristics and on hog production practices and costs were summarized for these producers in order to explore variations in production cost, economies of size, and regional diversity in U.S. hog production.