II. Abstract

This study evaluates the economic impact of changing pig space allotments in a pig production system. Increasing concerns regarding the health and well-being of meat animals raised in confinement facilities have resulted in consideration of increasing the space allotment for animals. A survey was conducted to determine pig space allotments currently in use by the industry. Pig space allocations per pig currently in use averaged 7.19 square feet for confinement facilities and 11.57 square feed for hoop systems. A simulation model was developed to use in evaluating economic impacts of increasing pig space allotments above those currently in use. Space restrictions result in two key economic impacts: 1) an under utilization of the existing confinement production asset base, and 2) a resulting impact on potential marketing practices.

Three major results emerged. First, restricting pig space has significant negative financial consequences for existing commercial confinement swine production systems. Secondly, marketing weight and timing mitigation strategies can be a short-term solution when compared to restricting flows into the finishing phase of production, but are clearly inferior to the longer range solution of adding finishing barns to existing production systems to accommodate the pigs. Reducing pig flows into the finishing phase through reduced size of the breeding herd results in underutilizing the most expensive capital assets (farrowing) and therefore, is the least preferred strategy as it had the most negative impact on return on equity. Additionally, reducing pig flow in the finishing facility through selling weaner pigs, while superior to reduced size of breeding herd, is inferior to most scenarios where all pigs remained in the production system. It was also shown that because of changing weight and animal composition in marketing strategy scenarios that the pricing grid of the packer to which the producers market has a substantial impact on the consequences of marketing lighter pigs to meet pig space restrictions. Therefore, impacts will not be uniform across the industry. The simulations show that regardless of mitigation strategies adopted by existing swine producers there will be substantial and negative financial implications ranging from a 10 percent to a 97 percent reduction in return on equity. Therefore, adoption of space restrictions should be carefully considered in concert with any potential economic benefits which might occur, namely consumer willingness to pay for pigs raised in larger spaced facilities. As food chains consider imposing the space requirements on suppliers, they must recognize that the producers affected must be able to pass on some of the cost to downstream processors, retailers and ultimately consumers.

These research results were submitted in fulfillment of checkoff funded research projects. This report is published directly as submitted by the project’s principal investigator. This report has not been peer reviewed.

For more information contact:

National Pork Board, P.O. Box 9114, Des Moines, Iowa USA
800-456-7675, Fax: 515-223-2646, E-Mail: porkboard@porkboard.org, Web: http://www.porkboard.org/