A MARKOV CHAIN ANALYSIS OF PORK FARM SIZE DISTRIBUTIONS IN THE SOUTH: REPLY

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Rhodes' claim, that our analysis (DDH) "seems curiously unrelated to the structure of real-world hog production," is based on two criticisms. First, he suggests that our paper suffers from an apparent lack of knowledge about the industry as reflected in the poor use of data and industry assumptions that are not factual. Second, he argues that the analysis hinges on an assumption of the unlikely persistence of high hog/corn price ratios. It seems, however, that he ignores the major objective of our research effort, which was to provide information on how changing corn prices affect the size structure of pork farming in the South.

The South accounted for 15.1 percent of national pork production in 1982. Of this, 9 percent occurred in the South Atlantic Census Division. In 1982, Census data compiled by Disney show that there were 27,277 pork farms in the South Atlantic Census Division. Producers of less than 50 market hogs per year accounted for 20,826 of those farms. Another 5,564 farms produced less than 200 market hogs per year. This left 673 producers raising between 200 and 500 market hogs per year and only 214 producers selling more than 500 market hogs per year. Admittedly, no further breakdown of these large producers was made. However, it should be clear that the size categories chosen by DDH and reported in Census reports are reflective of the actual pork industry in the South Atlantic Census Division.

It is expected that new Census data will show a substantial increase in the number of extra-large pork farms. This will, in fact, be due to a flourish of vertical integration within the pork industry along the East Coast. The increased presence of various forms of vertical integration, therefore, substantiates Rhodes' criticism that initial entry into pork farming is more likely at the larger size categories. However, DDH does not rely on an assumption of initial entry only at the small size category. We merely suggest (p. 63) that the presence of higher hog/corn price ratios could provide the incentive for grain producers to begin raising hogs as a means of more profitably marketing their grain. This new entry, we hypothesized, would most likely occur in the small and medium size categories. Discussions with those familiar with pork production in the South Atlantic Census Division will quickly lead one to conclude, however, that the trend is toward more single-enterprise pork farming.

Rhodes' second criticism, that hog/corn price ratios of 35 (number of bushels of corn equal in value to 100 pounds of hog, live weight) were unrealistically high and were the reason for our resulting shifting pork farm size distributions, is somewhat confusing. Actually, three hog/corn price ratios were used representing low, medium, and high levels for the hog/corn price ratio. At the time this research was originally conducted, hog/corn price ratios in the upper thirties had not been observed. However, during September of 1986, the hog/corn price ratio was reported at 40.2. The yearly average for 1987 was 33.6 (USDA).

As DDH comments (p. 63), the long-term effects of decreased corn prices on the hog/corn price ratio are difficult to determine. Therefore, the range of hog/corn price ratios was used to allow those interested in the effects of grain policy on pork farm size and structure to determine the direction of change in the industry, although admittedly holding many other variables constant.

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