Price risk management: What to expect

# Management Factors: What is important, prices, yields, costs or technology adoption?

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This is the second in a series of five fact sheets. The first fact sheet (F-589) described that few, if any, people can predict prices. Prices cannot be predicted because the market uses all available information to determine price. What makes today's price different from yesterday's price is "new information." If this "Efficient Market" hypothesis is correct, then one marketing strategy is nearly as good as any other marketing strategy. What is important is that producers develop "rules" for marketing.

This fact sheet reports on research conducted at Kansas State University by Dr. Terry Kastens and Dr. Kevin Dhuyvetter. They used records from over 1,000 Kansas farms during a 10-year period from 1990 through 1999 to evaluate management practices that explained the difference between the top 1/3 of the farms and the bottom 1/3 of the farms. Their conclusion was that price (marketing strategy) made little or no difference in the profitability of the farms. Important management factors were costs, yields, and use of technology.

The Department of Agricultural Economics at Kansas State University has a farm business specialist group that assists Kansas' producers with their farm records. Drs. Kastens and Dhuvetter used these records, from farms that produced wheat, corn, soybeans, grain sorghum, and alfalfa, to determine which management practices made the greatest difference in profit among the farms.

Management factors considered for use in explaining the difference in profit were planting intensity, costs, price received, use of technology, and yields. Risk, size, and government payments were included as important long-run factors but were not considered important in the short run.

Standard deviation was used to measure the difference between the average of the bottom one-third of the market and the average of the top one-third of the market. For example, the standard deviation for profit was $75 per acre. This implies that there was a $150 difference between the average profit of the top one-third of producers and the average in the bottom one-third. Profit may not be positive. Thus, $75 per acre or $150 per acre does not imply anything about the average profit per acre over the 10-year period.

Producers in the top one-third had 32 percent lower costs than average and producers in the bottom one-third had 32 percent higher costs than average. There was a 64 percent spread between costs of the top and bottom one-third of the producers. There was plus or minus 14 percent spread in yields, 9 percent spread in price, 42 percent spread in technology adoption, and 23 percent spread in planting intensity.

When converted into dollars per acre, there was a $57.22 spread between the bottom one-third and top one-third average costs ($28.61 x 2). Planting intensity (number of crops per year) produced a spread of $24.94; yield $15.12; and technology a spread between the top and bottom one-third of $14.40. The spread for price was $0.56 and was the only factor that was not significantly different from zero.

In the short run, producers have the highest probability to increase profit by first lowering costs, followed by planting intensity, yield, and technology. In the long run, taking and managing production risk is the single most important management factor. Managing production risk produced a spread between the top and lower one-third of $46.50 per acre.

In the long run, size was the second most important factor with a spread of $39.80. Government payments were $13.36 per acre higher for the top one-third compared to the bottom one-third.

Relative to managing price risk the conclusion was that, within reason, the marketing strategy is the least likely management factor to increase profit. This finding is consistent with the "efficient market theory."

## Caveat

The Kansas State University research results do not imply that marketing should be totally ignored. The important point is that "marketing efforts" offer less probability of profit enhancement than efforts applied in other management areas.

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