



AN ECONOMIC ANALYSIS OF U.S. WHEAT EXPORT PROMOTION

EXECUTIVE SUMMARY

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The purpose of this study was to measure the economic impacts of the generic export promotion programs operated by U.S. Wheat Associates (USW). An econometric modeling approach quantifying economic relationships using economic theory and statistical procedures with data was used to assess the effectiveness of U.S. wheat export promotion. The methodology allows simultaneous accounting for a variety of factors affecting wheat export demand in the foreign market in question, including: U.S. wheat prices; competing country wheat prices; exchange rates; competing country wheat exports; income; and wheat export promotion expenditures. Casting the export promotion evaluation in this framework enables the study to filter out the effect of other factors and, hence, directly quantify the net impact of USW promotion activities on U.S. wheat demand from overseas consumers.

This study answers four key questions about the effectiveness of USW and FAS export promotion. Two trade models were developed to address the questions: a macro model representing U.S. wheat demand by all coun-

tries importing U.S. wheat; and a more disaggregated model of U.S. wheat imports into specific countries.

1. What is the responsiveness of the import demand for U.S. wheat in the world market, and for selected important countries with respect to U.S. wheat export promotion?

Overseas demand for U.S. wheat is highly responsive to export promotion spending. Results from the macro model indicate that a 1% change in export promotion changed exports more than 0.295%, holding all other demand factors constant. The level of responsiveness is within the range of estimated values for other commodities in other studies, but on the high side of the range, indicating wheat promotion is highly effective relative to other commodities.

2. What would U.S. wheat exports have been in total and in selected countries, had there been a 50% reduction in export promotion?

Exports would have been substantially less if export promotion had been reduced by 50% between 2000 and 2007. Specifically the macro model indicates that exports would have been 17.1% lower, equal to a total loss

of 37.4 million metric tons (1.374 billion bushels) or 4.7 million metric tons (just under 172.7 million bushels) per year.

3. How does the gain in export net revenue due to wheat export promotion compare to the costs of the promotion?

The benefit of export promotion far exceeds the cost of conducting export promotion programs and has a large and beneficial impact for producers and the economy. Wheat producers provide roughly 50% of total annual export promotion investment directly or through in-kind contributions (USDA/FAS pays for the other 50%). Based on Model 1 results, wheat producers are receiving benefits of export promotion ranging from 19.2 to 37.22 times their investment in these programs and an average of 23 times. In terms of total gross rather than net revenue to producers, Model 1 results indicate that, on average, \$1.00 invested in wheat export promotion increases total gross revenue by \$95 to \$186.

Promotion expenditures are exceedingly small relative to product value with an average investment in 2007 of just 0.27% of the value of wheat exports. The model assumed a net margin factor for wheat producers (the portion of a revenue increase that goes to producers rather than other parts of the wheat industry) equal to

10%, based on recent USDA data. The model estimates this relatively small investment increased net producer revenue in a range from \$96.1 million to \$188 million per year, with an average of \$117 million. Thus, the total annual gross return to the entire wheat industry ranges from \$961 million to \$1.8 billion.

4. What is the marginal return of the export promotion programs in total and in selected importing countries? Specifically, what is the gain in export revenue due to an additional 1% increase in the export promotion expenditures?

Because marginal returns on U.S. wheat export promotion program spending is also significant, U.S. wheat producers would be very likely to receive incremental revenue above their costs by increasing their investment. The macro model indicates that for every additional \$1 invested in export promotion, U.S. wheat producers would earn marginal returns of \$7.72 to \$17.38, with a reasonable midpoint of \$9.95.

Overall, the study indicates that the economic benefits of U.S. wheat export promotion are substantial and that increasing the promotion investment has the potential to increase returns to wheat producers, the wheat supply chain, and the U.S. economy.

ABOUT U.S. WHEAT ASSOCIATES

U.S. Wheat Associates is the industry's market development organization working in more than 100 countries on behalf of America's wheat producers. The activities of USW are made possible by producer checkoff dollars managed by 19 state wheat commissions, in-kind support, and cost-share funding provided by USDA's Foreign Agricultural Service. For more information, visit www.uswheat.org or contact your state wheat commission.

ABOUT THE AUTHOR



Harry M. Kaiser, Ph.D., is the Gellert Family Professor of Applied Economics and Management at Cornell University. He teaches and conducts research in the areas of price analysis,

marketing, industrial organization, policy, and quantitative methods. Professor Kaiser has written 110 journal articles, four books, 17 book chapters, and over 200 research bulletins in these areas. He has received over \$8 million in research grants from such agencies as the National Science Foundation, National Institutes of Health, U.S. Department of Agriculture, and the New York Department of Agriculture and Markets.

Since 1994, Professor Kaiser has been the director of the Cornell Commodity Promotion Research Program. Much of his research focuses on the market-wide economic effects of commodity advertising and promotion programs. Currently, Professor Kaiser and his staff annually conduct the economic analysis required by the U.S. Congress for the national dairy and

fluid milk processor advertising programs. Professor Kaiser was involved with some of the first research that investigated the economic impacts of climate change on the U.S. agricultural sector. More recently, Professor Kaiser has worked extensively in the area of behavioral and experimental economics, examining such issues as making the voluntary contributions mechanism more efficient and the impact of food safety on demand.

Professor Kaiser served as editor of *Agricultural and Resource Economics Review* from 1999-2001, associate editor of the *American Journal of Agricultural Economics* from 1999-2001, and has been the associate editor of *Agribusiness: An International Journal* since 1999. He was the President of the Northeastern Agricultural and Resource Economics Association from 2006-2008, and was on the executive board of directors of the American Agricultural Economics Association from 2003-2005. He is currently on the executive board of directors of the Council on Food, Agricultural, and Resource Economics. Professor Kaiser was co-recipient of the outstanding journal article of the year from the Northeastern Agricultural and Resource Economics Association in 1991, and from the Canadian Agricultural Economics Society in 2009. In 2006, Professor Kaiser received the Alumni Distinguished Achievement Award from the University of Wisconsin-Eau Claire. In 2009, he received the highest non-degree honor bestowed on an alumnus of the University of Minnesota, the Outstanding Achievement Award. He also received the Outstanding Alumni Award from the Department of Applied Economics from the University of Minnesota in 2009.

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