THE IMPACT OF EEP REMOVAL ON U.S. WHEAT

The Export Enhancement Program (EEP) was initiated under the Food Security Act of 1985. The purpose of the program was to offset the adverse effects on U.S. exports due to unfair trade practices or subsidies by competing exporters and also to support U.S. prices. Supply restrictions, price supports, and export subsidies, together caused U.S. wheat prices to be above world prices over the past decade. Since its inception, EEP has played a major role in exports of many agricultural commodities, particularly wheat, which has accounted for 80 percent of the value of all EEP-assisted sales.

Over the period 1985/86 to 1995/96 more than \$5.5 billion were spent on wheat EEP sales. Figure 1 shows the distribution of expenditures over the 10-year period. The expenditures have varied widely depending on worldwide wheat supply conditions. During the last decade, EEP has been applied to an average of 50 to 70 percent of U.S. wheat exports. The impact of EEP in terms of additionality¹ and cost effectiveness has been analyzed by various studies such as Olsen (1987), Bailey (1988), Hillberg (1988), Brooks et al. (1990), and Mohanty (1995). The results of these studies have varied widely (i.e., additionality estimated by these studies ranges from 5 to 70 percent). Similarly, the U.S. General Accounting Office summarized the findings of eight empirical studies analyzing the impacts of EEP on U.S. wheat price and reported that EEP is responsible for a rise in U.S. wheat prices ranging from 0.8 percent to 12 percent.

Under the Uruguay Round of the GATT agreement, the United States has agreed to reduce the value of expenditures on subsidized exports and to reduce the volume of subsidized expenditures relative to the 1986-90 base. In addition, the FAIR Act of 1996 has further reduced EEP expenditures to below GATT

commitments limits for the next four years. Although constrained by both GATT and the FAIR Act, EEP may be an important policy tool to meet U.S. wheat export objectives in the next 10 years.

Objective

With the current higher world prices, EEP may have a relatively smaller impact on the quantity of wheat exported and on farm, Gulf, and importer prices. The objective of this study is to measure the impacts of the elimination of the EEP on U.S. wheat exports and prices over the coming 10-year period.

Method

The commodity trade models at the Food and Agricultural Policy Research Institute (FAPRI) were used to analyze the policy question. FAPRI has developed and maintained commodity trade models such as for wheat, coarse grains, rice, soybean complex, livestock, and dairy. These trade models are related through cross-price linkages in the supply and demand components of these model, yet each model can be solved independently. However, all these trade models, along with the U.S. domestic crops and livestock models maintained by FAPRI, are solved iteratively to obtain a simultaneous solution. Equilibrium prices, quantities of supply and demand, and net trade are determined by equating excess demands and supplies across each region and explicitly linking prices in each region to a world reference price. A more detailed description of FAPRI modeling system can be found in Meyers et al. (1991).

EEP is incorporated into the wheat and barley trade model by determining the appropriate average import subsidy received by each targeted importer and the appropriate effective

¹ Additionality is measured as the proportion of subsidized exports that would not have occurred in the absence of EEP programs.

export subsidy offered by each competitive exporter. The average EEP subsidy offered by the United States to a targeted importer in a crop year is computed as total subsidy divided by total shipments to that importer. The effective export subsidies offered by U.S. export competitors were calculated by assuming the exporters generally responded to be competitive with the U.S. EEP subsidy. The average export subsidy is equal to the country's proportion of total commercial sales to targeted EEP markets weighted by the respective average EEP subsidies to each market.

A baseline projection was developed for 1996/97 to 2005/06 using FAPRI commodity models. The impacts of EEP were then determined by running the alternate (No EEP) scenario in which the EEP effects on importers and exporters are removed. The difference between the two scenarios provided the impacts of EEP.

The FAPRI baseline projection involves a complex and rigorous process. This process brings together researchers from eight universities in the fall. The staff develop a five-year preliminary projection and each commodity is reviewed by two distinguished outside experts. Taking into account the comments by experts, the analysts develop preliminary baseline projections in November. Then, the preliminary baseline is reviewed by more than 150 experts from the United States and abroad who have affiliations with universities, industry, and government. Their comments are incorporated into the final baseline, which represents a product of the model and expert opinion.

Some of the important factors affecting this baseline are outlined as follows.

1. Strong economic growth around the world, particularly in developing countries: World economic growth is projected to average around 3.5 percent annually over the next decade. Developed economies are expected to grow at 2.4 percent a year, but more

- importantly, in developing countries, where food demand is more responsive to income, it is projected to average about 5.7 percent annually over the next decade.
- FAIR Act in the United States: This
 legislation has increased the planting
 flexibility of farmers with the removal of
 base program. The FAIR Act places limits
 on the financing of EEP expenditures,
 below GATT-allowed level through 2000.
 After this period the expenditure levels are
 consistent with the GATT limits.
- 3. Assumptions regarding European Union (EU) enlargement and further reforms of Common Agricultural Policy (CAP):
 Although potential expansion of EU includes Central and Eastern European countries, no explicit assumptions are made regarding further CAP reforms to facilitate this accession and are assumed not to occur before the period end, 2005.
- 4. Other policy changes around the world:
 These include the reduction of export taxes in Argentina, removal of monopoly import agency in Egypt and Tunisia, elimination of corn board in South Africa, introduction of PROCAMPO, the direct income support program of Mexico, etc.

For our baseline projection, maximum EEP expenditures are constrained by FAIR Act limits but minimum EEP expenditures depend on EU export restitution. For the EU, the level of export restitution depends on the difference between world price and its domestic price. If domestic price is above the world price level, then EU subsidizes, which in turn initiates the United States to subsidize its exports through EEP. On the other hand, if world price is higher than EU domestic price, then EU need not have to provide export restitution, and, subsequently, the EEP subsidy is reduced.

Results

In the baseline projection, average per unit EEP subsidy is projected to be around \$14 per ton for 1997/98 to 1999/00 (Figure 2). But

after 1999/00, average per unit subsidy is reduced to \$10 per ton and subsequently reduced to \$5 per ton by 2003/04 and zero by 2004. Correspondingly, U.S. EEP wheat expenditures are estimated to be \$131 million in 1997/98 and increase to \$145 million by 2000/01, and decline to \$0 for 2004/05. The reduction of EEP subsidy is linked to EU restitution; that is, after 2000/01, world wheat price exceeds the EU domestic price, enabling EU to export without any subsidy and the U.S. EEP subsidy phases out.

Some of the important analytical results from the baseline and no-EEP scenario are summarized in Table 1. The results indicate that elimination of EEP decreases U.S. wheat exports by 1 to 5 percent (4 to 56 million bushels) over the projection period (Figure 3). Thus, the export additionality, calculated as a ratio of change in exports due to EEP and quantity of wheat exported through EEP, ranges from 10 to 15 percent during the period 1997/98 to 2003/04 (Figure 4). In other words, commercial displacement due to EEP is estimated to be 85 to 90 percent. Although the size of the EEP varied over the baseline period, the estimated percentage of additionality remained relatively stable at 10 to 15 percent.

The decline in world wheat trade due to elimination of EEP even further diminishes the impacts of EEP on the U.S. share of world wheat trade share changes, which ranges from a 0.12 percent to a 1.35 percent decline (Figure 5). Similarly, average wheat farm price decreases by \$0.05 to \$0.15 per bushel (Figure 6). Figure 7 presents a comparison among importer prices with and without EEP. EEP wheat price is the price paid by the

importers for EEP wheat, whereas average importer price (with EEP) is the weighted average of both EEP and non-EEP wheat. As shown in Figure 6, average importer price increases only by \$0.5 to \$4 per ton due to the elimination of EEP. This suggests that removal of EEP during the projection period may not increase the price paid by importers to the extent there would be a significant negative impact on U.S. wheat exports.

Other results not reported here include the responses of exporters and importers to the EEP. The results suggest that elimination of EEP slightly increases exports from other competing exporters. Wheat production in exporting countries also showed some positive impacts without EEP. Similarly, elimination of EEP reduced the imports of most importing countries. Some importing countries also exhibited no net import changes without EEP because of the insulation of domestic policies from external price fluctuations. The overall net wheat trade reduction ranges from 0.03 to 0.94 mmt.

In summary, the elimination of EEP is likely to marginally reduce U.S. exports and expand competitors' market shares. The additionality of the program is projected to be 10 to 15 percent over the projection period. Thus, the displacement of commercial exports ranges from 85 to 90 percent. The results also suggest that the ability of the EEP to expand U.S. exports is somewhat limited mainly due to domestic policies of major wheat importers and exporters that insulate domestic price from world price fluctuation.

Million Dollars

1,200

1,000

800

400

200

1985/86 1986/87 1987/88 1988/89 1989/90 1990/91 1991/92 1992/93 1993/94 1994/95 1995/96

EEP Expenditure

Figure 1. EEP Wheat Expenditure (1985/86 to 1995/96)

Figure 2. U.S. EEP Wheat Expenditures and Per Unit Subsidy (1997/98 to 2005/06)

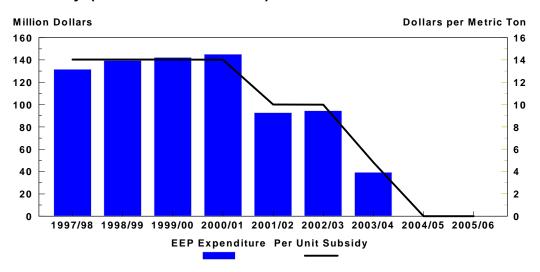


Figure 3. U.S. Wheat Exports

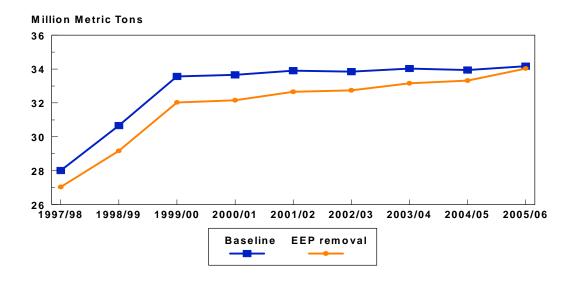


Figure 4. Commercial Displacement and Additionality due to EEP (Proportion of Subsidized Quantity)

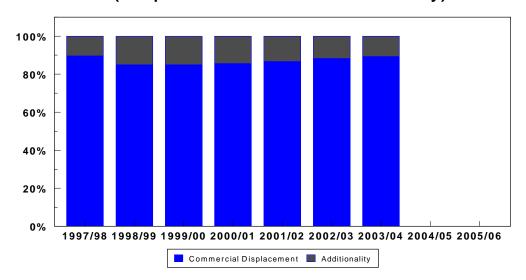


Figure 5. U.S. Share of World Wheat Exports

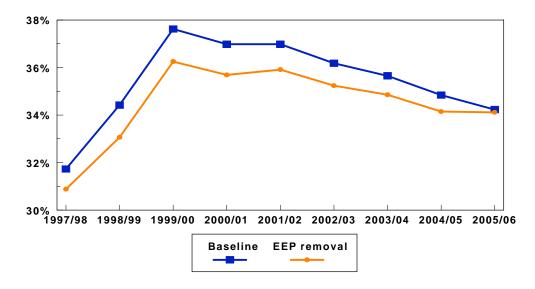


Figure 6. U.S. Wheat Farm Price

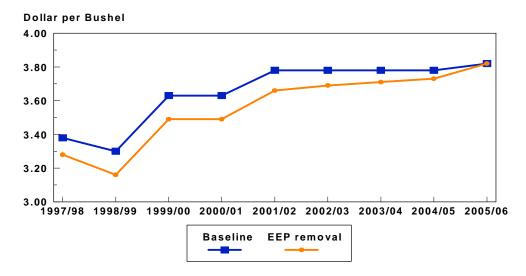


Figure 7. Price Paid by Importers for U.S. Wheat



Table 1: Export Enhancement Program Removal Impacts on U.S. Wheat

	1997/98	1998/99	1999/00	2000/01	2001102	2002/03	2003/04	2004/05	2005/06
EEP Expenditure		94975 (V. 81974 E. 8	1700 to 270 to 200 to 200	(U.S. Dollars				300	
Baseline	131,720,950	139,535,894	142,234,175	145,148,283	92,731,447	94,485,685	39,297,508	0	0
EEP removal	0	0	0	0	0			0	0
Average EEP Bonus			(U.	S. Dollars/Metri					
Baseline	14.04	14.04	14.03	14.02	10.00	9.99	4.83	0.00	0.00
EEP removal	0	0	0	0	0	0	0	0	0
Farm Price	(U.S. Dollars/ Bushel)								
Baseline	3.38	3.30	3.63	3.63	3.78	3.78	3.78	3.78	3.82
EEP removal	3.28	3.16	3.49	3.49	3.66	3.69	3.71	3.73	3.82
Change	-0.11	-0.14	-0.15	-0.14	-0.12	-0.09	-0.06	-0.05	0.00
% change	-3.14%	-4.35%	-4.04%	-3.95%	-3.10%	-2.48%	-1.60%	-1.32%	0.01
FOB Gulf Price	(U.S. Dollars/Metric Ton)								
Baseline	151.96	148.51	162.67	162.65	169.01	169,20	168.86	168.98	170.85
EEP removal	147.36	142.30	156.33	156.45	163.95	165.14	166.24	166.83	170.87
Change	-4.60	-6.21	-6.34	-6.19	-5.06	-4.06	-2.62	-2.16	0.02
change	-3.03%	-4.18%	-3.90%	-3.81%	-2.99%	-2.40%	-1.55%	-1.28%	0.01
Importer Price									
Baseline	142.83	139.39	53.55	153.53	162.51	162.70	165.72	168.98	170.85
EEP removal	147.36	142.30	156.33	156.45	163.95		166.24	166.83	170.87
Change	4.53	2.91	2.78	2.92	1.44	2.44	0.52	-2.16	0.02
change	3,17%	2.09%	1.81%	1.90%	0.89%	1.50%	0.31%	-1.28%	0.01
U.S. Exports	(Million Metric Tons)								
Baseline	28.01	30.67	33.56	33.66	33.90			33.94	34,17
EEP removal	27.04	29.17	32.03	32.16	32.66	32.74	33.16	33.32	34.03
Change	-0.98	-1.50	-1.53	-1.51	-1.24	-1.12	-0.88	-0.62	-0.13
% change	-3.48%	-4.88%	-4.55%	-4.47%	-3.67%	-3.30%	-2.58%	-1.83%	-0.39%
EEP Quantity	9.38	9.94	1 0.14	10.35	9.27	9.46	8.14	0.00	0.00
Additionality	10.40%	15.04%	15.05%	14.54%	13.41%	11.81%	10.77%	0.00%	0.00%
Total World Wheat Trad	e								
Baseline	88.29	89.10	89.21	91.04	91.68	93.57	95.47	97.42	99.80
EEP removal	87.56	88.26	88.36	90.10	90.94	92.91	95.14	97.58	99.77
Change	-0.73	-0.85	-0.84	-0.94	-0.74	-0.67	-0.33	0.16	-0.03
% change	-0.83%	-0.95%	-0.95%	-1.03%	-0.81%	-0.71%	-0.35%	0.16%	-0.03%
U.S. Share of Trade				(Percent)					
Baseline	31.73%	34.42%	37.62%	36.98%	36.98%	36.18%		34.84%	34.23%
EEP removal	30.88%	33.06%	36.25%	35.69%	35.91%	35.24%	34.85%	34.15%	34.11
Change	-0.85%	-1.36%	-1.37%	-1.29%	-1.07%	-0.94%	-0.80%	-0.69%	-0.12%

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