Agricultural Policy: High Commodity and Input Prices

Andrew Schmitz, Hartley Furtan, and Troy G. Schmitz

Because of high commodity prices, beginning in 2006, subsidies to farmers in the United States, the European Union, and Canada have been reduced significantly. However, significant losses have been experienced by the red meat sector, along with escalating food prices. Because of rising input costs, the "farm boom" may not be as great as first thought. Ethanol made from corn and country-of-origin labeling cloud the U.S. policy scene. Higher commodity prices have caused some countries to lower tariff and non-tariff barriers, resulting in freer commodity trade worldwide. Policymakers should attempt to make these trade-barrier cuts permanent and should rethink current policy legislation to deal with the possibility of a collapse of world commodity markets. Agricultural commodity prices have dropped significantly since early 2008.

Key Words: agricultural policy, high commodity prices, input prices

For many years, farmers worldwide, including in the United States, the European Union, and Canada, received large direct and indirect farm subsidies. This picture changed dramatically beginning in 2006. Prices for oil, grains, oilseeds, and pulses more than doubled. This paper discusses escalating commodity prices in the context of U.S., European Union, and Canadian agricultural programs and policies. These programs are likely to have little effect on world agriculture unless there is a significant drop in commodity prices. These policies should be redesigned to account for the possibility that prices could once again "hit the tank." Higher commodity prices translate into higher food prices worldwide. This, in turn, has motivated importers to lower tariff and non-tariff barriers. Some argue that high food prices have brought about a freer trade environment than would be possible under trade negotiations alone.

U.S. Farm Legislation

Agricultural commodity and conservation legislation in the United States has roots in the Agricultural Adjustment Act of 1933. Between 1929 and 1932, net cash farm income fell from US$5.2 billion to US$1.4 billion. With the introduction of new stabilization policies, the magnitude of government transfers to U.S. agricultural producers increased from zero dollars in 1933 to US$28 billion in 2000. As a result, U.S. farm income increased from approximately US$1.4 billion in 1932 to approximately US$56 billion in 2000.

The first U.S. farm bill was passed by Congress in 1933. Until 1970, U.S. farm bills dealt mainly with issues such as rural poverty, soil conservation, crop insurance, and farm credit. The 1970 U.S. Farm Bill introduced direct commodity price supports for the first time. Farm bills from 1970 to 1996 introduced a number of measures such as the Conservation Reserve Program (CRP), payment-in-kind (PIK), and the Export Enhancement Program (EEP). The reform act of 1996 introduced dramatic changes such as removing restrictions on acreage set-asides and replacing the target price and deficiency mechanisms with seven annual market transition payments.

Andrew Schmitz is Professor and Eminent Scholar in the Department of Food and Resource Economics at the University of Florida in Gainesville, Florida. Hartley Furtan is Professor in the Department of Agricultural Economics at the University of Saskatchewan in Saskatoon, Saskatchewan. Troy Schmitz is Associate Professor in the Department of Management and Agribusiness at Arizona State University in Mesa, Arizona.

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There were large farm product surpluses between 1970 and 1996. Commodities such as milk and tree fruits had different programs aimed at raising producer incomes and prices. Marketing orders allowed for price discrimination between markets by setting limits on the quantity sold to the high-value market. These orders allowed producers to receive blended prices, which were higher than the competitive price level. They also allowed producers to control quality by specifying minimum grades and sizes. In addition, checkoffs were available for research and development and for advertising.

Key elements of the 2008 U.S. farm program, like the 2003 program, are the loan rate and target price provisions for grains, upland cotton, and oilseeds. The loan rate for corn remained unchanged, as did the target price. This was also true for rice. For soybeans, the loan rates remained unchanged, but the target price was increased by U.S. 20 cents per bushel. For cotton, both the loan rate and target price essentially remained unchanged. For wheat, both the loan rate and the target price were increased, with the latter increasing from US$3.92 per bushel to US$4.17 per bushel (Table 1). Overall, support prices in nominal terms changed very little. However, in view of the sharp rise in input cost beginning in 2006, real support prices (i.e., loan rate and target price) were significantly reduced.

Figures 1 through 5 put the loan rates and target prices from above in the context of actual prices. Except for cotton, market prices through mid-2008 are significantly above target prices. As a result, there has been a significant reduction in U.S. farm payments since neither the loan rate nor the target price is binding.

Conceptual Framework

A major reason why rising commodity prices have affected food prices as much as they have is because rising commodity prices remove the need for government payments. Historically, in the United States, the latter have kept food prices lower than they otherwise would have been. Consider the basic framework of Figure 6, where the production quantity q^* is established where a given support price (P_s) intersects the water-subsidized supply curve (S') at point *o* instead of at point *i*, where it would otherwise be if only a price support subsidy were in effect. The addition of the water subsidy to the price support subsidy must necessarily increase q_0 to q^*, given that both types of subsidies are binding simultaneously. In addition to the increased output, there is a decrease in the resulting price necessary to clear the world cotton market, P_w. For example, under a price support subsidy alone, the market-clearing equilibrium shifts from point *e* (i.e., no subsidies) to point *h*; while for a water subsidy alone, the shift is from point *e* to point *k*. However, with both subsidies in place, the market-equilibrating shift is from point *e* to point *b*.

Under the multiplicative effects (ME) scenario illustrated in Figure 6, the intersection of the support price (P_s) and the subsidized supply curve (S') establishes both the output quantity q^* (at point *o*) and the world price P_w (at point *b*). Domestic producers receive the area $P_s onme P_f$ as a net gain, while domestic consumers gain the area $P_f dc P_w$. The area *cdeb* (slippage) represents the rents received by importing countries. The cost to the government for the water subsidy is area *amno*, while the cost of the government price support payments equals area $P_s obP_w$. Therefore the combined net domestic cost to society of the two subsidies applied together is the shaded area *aedcb*. The net cost comparison is made with reference to point *e*, where P_f and q_2 are free from distortions caused by U.S. cotton subsidies.

A key element that determines the size of the welfare cost of cotton is the extent to which domestic production is exported. The greater the exports are, the greater the cost is. Large exports are one of the reasons for the inefficiency cost associated with cotton (Powell and Schmitz 2005). Table 2 shows that roughly 70 percent of the cotton produced in the United States is exported. Of the major commodities, corn is at the bottom, at less than 20 percent of total production.

In the context of Figure 6, note that producer prices under a target price specification exceed the equivalent consumer prices. It is this gap that has given rise to large government payments. This model was used to estimate the impact of U.S. cotton policy for 2002 and 2003. Rossi, Schmitz, and Schmitz (2007) find that the U.S. cotton program depressed world prices somewhere between 10 percent and 20 percent, depending on whether producers made production decisions at the loan rate or target prices.

Figures 1 through 5 show how the world has changed and why the welfare costs of U.S. grains,

Table 1. U.S. Loan Rates and Target Prices, Selected Crops (2002 and 2008)

Commodity	2002		2008	
	Loan Rate	Target Price	Loan Rate	Target Price
	(*U.S. dollars*)		(*U.S. dollars*)	
Corn ($/bushel)	$1.95	$2.63	$1.95	$2.63
Rice ($/hundredweight)	$6.50	$10.50	$6.50	$10.50
Soybeans ($/bushel)	$5.00	$5.80	$5.00	$6.00
Upland cotton ($/pound)	$0.52	$0.72	$0.52	$0.71
Wheat ($/bushel)	$2.75	$3.92	$2.94	$4.17

Source: U.S. Department of Agriculture (2008).

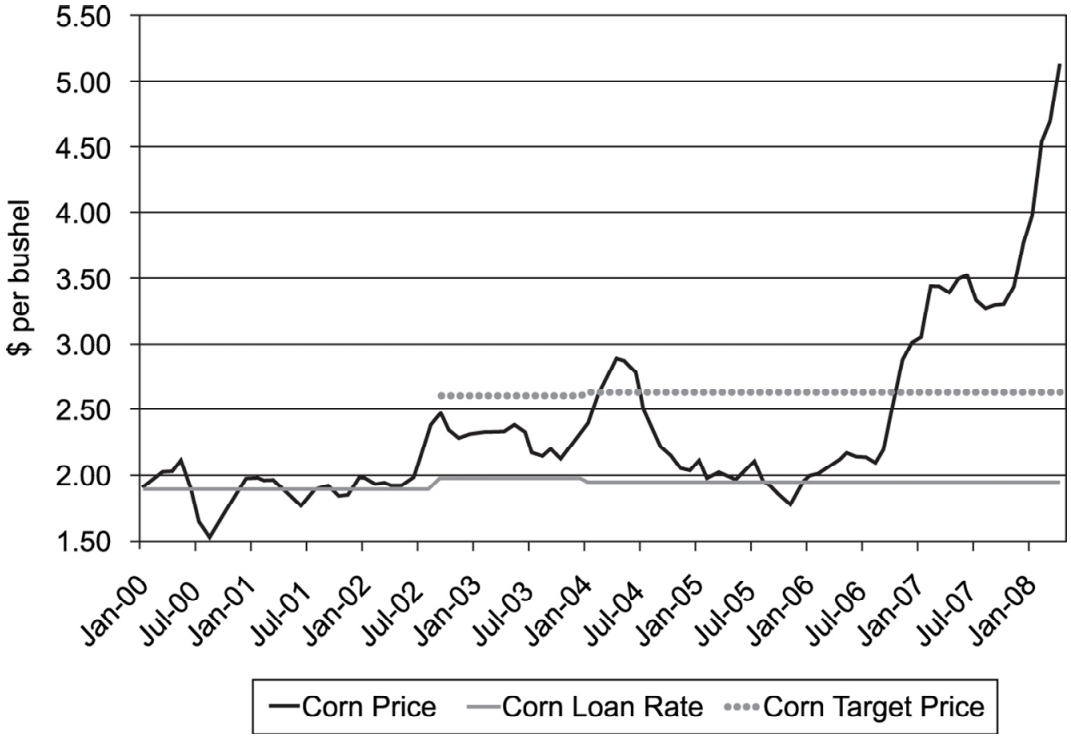

Figure 1. Corn: Loan Rate and Target Prices

oilseeds, and cotton are small indeed. Producer prices have risen above the target prices, but accompanying these has been an increase in consumer prices. In Figure 1, for a market price above the support price, consumers pay an equivalent price. There is no longer a wedge between producer and consumer prices. High consumer prices now pay farmers' variable costs, where before part of this was covered by government payments.

COOL: Producers and Consumers

A controversial element of the U.S. Farm Bill is the country-of-origin labeling (COOL) requirements. Unlike the previous legislation, poultry

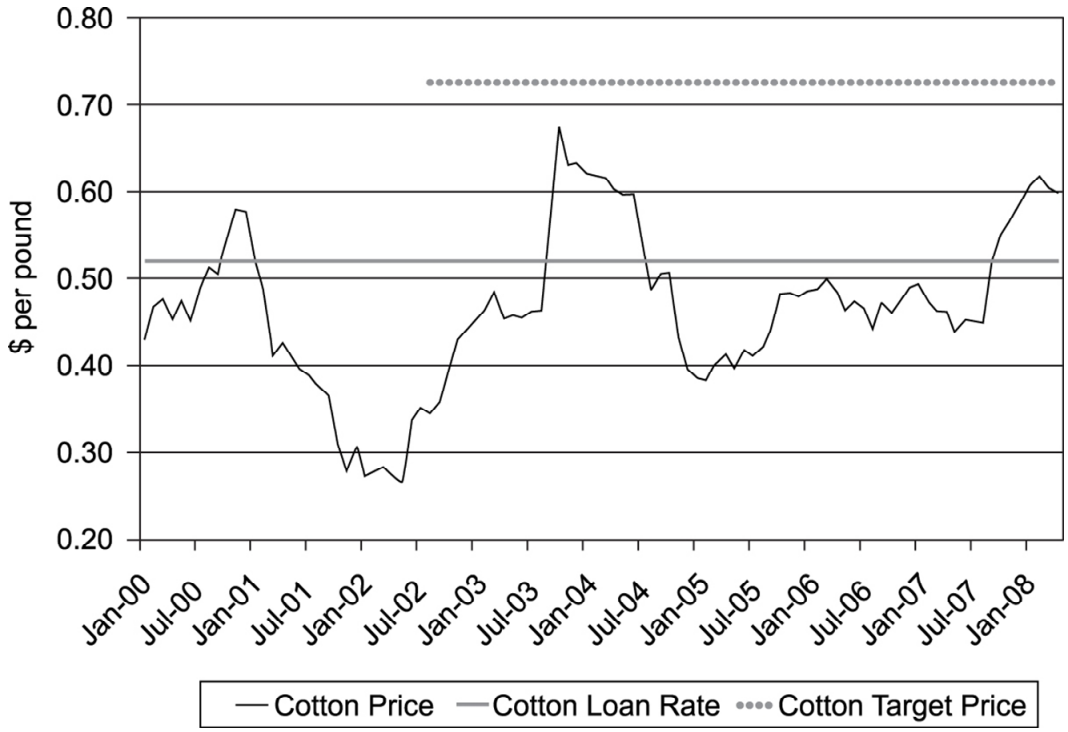

Figure 2. Cotton: Loan Rate and Target Prices

also falls under COOL. Unfortunately, there has been little theoretical discussion of COOL effects, nor has there been a great deal of empirical analysis on the subject. COOL can cause food prices to increase even further. Consider Figure 7, where there are two countries—say, Canada and the United States. The excess supply curve of Canadian beef is given by E_s. The supply curve of U.S. beef is S_u. The total demand by U.S. consumers for all beef produced in both Canada and the United States is given by D_u, where D is the demand by U.S. consumers for beef produced in the United States. Under free trade, Canada exports beef to the United States at price P_f. At this point, beef from Canada is a perfect substitute for U.S.-produced beef.

The COOL requirements are not new. For example, Florida initiated a COOL statute in 1979 for fruits, vegetables, and honey, and added aquaculture products in 1996. COOL labeling is checked during routine store sanitation inspections. The costs and benefits from labeling have never been empirically determined, but transaction costs due to COOL are likely one important cost component in the food chain. On many products, one sees labels such as "made in Canada" or "made in the United States" under no COOL laws. The companies that use such labels obviously believe that there is a positive rate of return from this type of investment, and the market dictates a return. Why then is there a need for compulsory COOL?

Suppose COOL creates a consumer perception of U.S. beef as being of superior quality to Canadian beef, and hence a willingness to pay a higher price for U.S. beef relative to Canadian beef. This has the effect of shifting the U.S. demand for U.S.-produced beef to D_c. Now the demand for Canadian beef shifts from D_f to D_f'. In equilibrium, the U.S. price rises from p_f to p_1. U.S. producers gain from COOL by $p_f p_1 ef$. In terms of Canadian beef, price falls to p_2 given consumption of q_3. There is a net loss for Canada of $p_2 abp_f$. Note that COOL acts as a non-tariff barrier, as it creates a price wedge between U.S. and Canadian producers of $(p_1 - p_2)$.

What happens if U.S. consumers, because of COOL, viewed Canadian beef as superior to U.S. beef? Consider where U.S. demand for U.S.-produced beef shifts to ED_f. This has the effect of

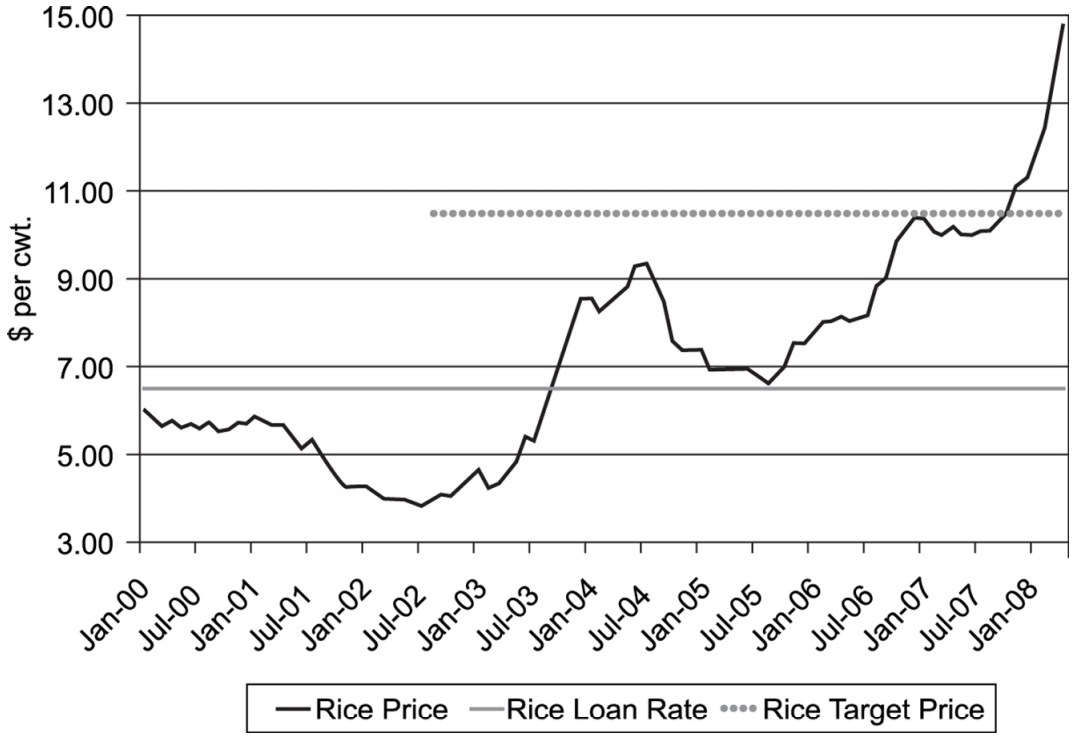

Figure 3. Rice: Loan Rate and Target Prices

shifting the Canadian demand to D_0, raising the price of Canadian beef to p_4, and lowering the price of U.S.-produced beef to p_3. U.S. producers now lose $p_3 q_f p_f$ from COOL, while Canada gains $pfbhp_4$. COOL still acts as a non-tariff barrier, but now the price for Canadian beef exceeds the U.S. price.

In the above discussion, we assume that COOL creates a "product differential effect." If it does not, then COOL merely adds to the costs of producing and selling beef through added transaction costs from labeling. Regardless, transaction costs under COOL essentially shift the aggregate supply of beef upwards.

In the above discussion, it is clear how beef producers in Canada and the United States are affected by COOL. The effect on consumer welfare is much more difficult to determine than on producer welfare. Consider Figure 8, in which P_f is the free trade price and beef is viewed as a perfectly substitutable commodity. U.S. beef production is q_f. Now suppose that because of COOL, U.S. beef demand shifts to D_c. If this were true, consumer welfare in the United States would fall. This is because of the loss in aggregate U.S. surplus of $abP_f > (p_2 gh + p_1 dj)$. However, what if demand shifts to D_c' instead of D_c? That is, for a given price and quantity, the shifted demand curve becomes more price-inelastic. In this case, consumers (as measured by consumer surplus) in the United States are made better off by COOL (this would have to be the case, or they would not view U.S. beef as superior to Canadian beef).

Ethanol and Market Distortions

The most charged and controversial subject is the production of ethanol from U.S. corn production. The U.S. Department of Agriculture (2008) forecasts that, by 2010, roughly 4.5 billion bushels of the corn grown in the United States, roughly one-third of the U.S. crop, will be used for ethanol production. There is tariff protection on the importation of ethanol production from abroad, along with ethanol tax credits. These encourage

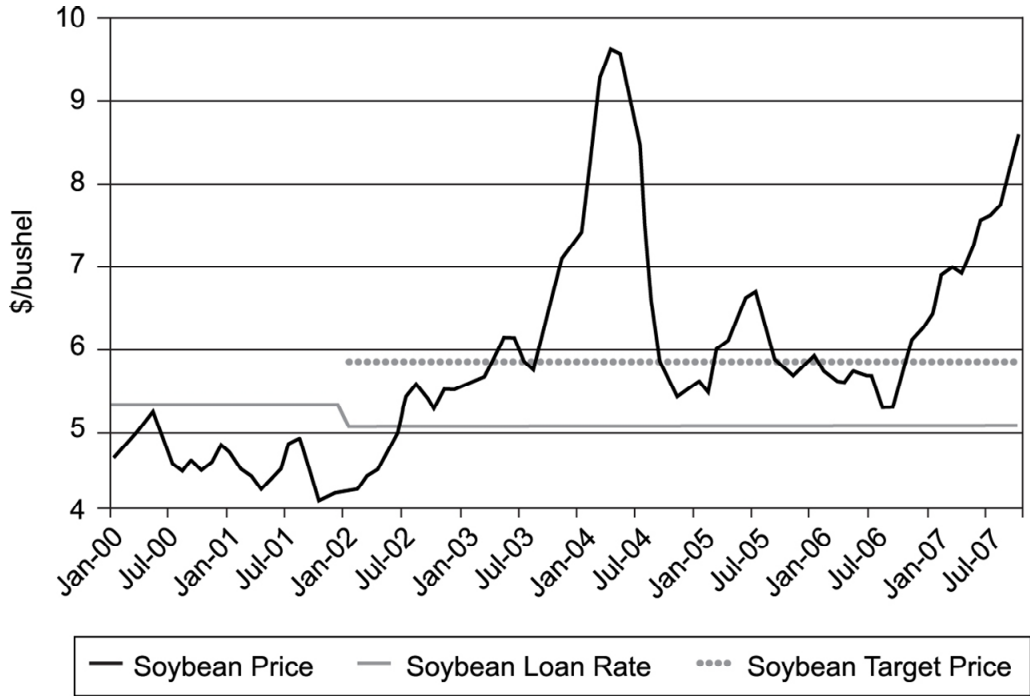

Figure 4. Soybeans: Loan Rate and Target Prices

ethanol production and interact with U.S. countercyclical and loan deficiency payments.

There are likely as many supporters of ethanol as there are those opposed to ethanol production from corn. One often hears negative statements about the impact of ethanol production. For example, Michael Grunwald discusses "The Clean Energy Scam" in *Time* magazine (Grunwald 2008). According to Grunwald, "politicians and big business are pushing biofuels like corn-based ethanol as alternatives to oil. All they're really doing is driving up food prices and making global warming worse—and you're paying for it" (*Time* cover page). Also, high corn prices have large negative impacts on the livestock sector (Figure 9).

Schmitz, Moss, and Schmitz (2007) and Gardner (2007) use a welfare economics framework to examine the impact of ethanol production from corn in the context of U.S. agricultural policy. They find that ethanol boosts corn prices somewhere between US$0.75 and US$1.25 per bushel, thus eliminating the need for U.S. countercyclical and loan deficiency payments. They further find that the demand for corn for ethanol production could be positive without a tax credit. At least two factors affect ethanol production, namely a favorable oil-to-corn price ratio and a tax credit for ethanol production.

Generally, the authors find that while there are gainers and losers from ethanol production, on net there can be significant welfare costs, but these costs can be small or even negative if ethanol has a significant impact on the price of gasoline from fossil fuels. The findings hinge as well on several other key parameters. A key component is the impact of ethanol on commodity payments. The rise in corn prices due to ethanol has wiped out the need for commodity payments. It is important to identify net benefits and costs from both a world and U.S. perspective, where little weight may be given to foreign impacts such as losses to corn importers. While ethanol certainly benefited U.S. corn farmers, it had a negative impact on livestock producers. On this there is general agreement. An interesting study by FarmEcon LLC for the Coalition for Balanced Food & Fuel, a group representing U.S. livestock, poultry, milk, and egg producers and meat processors,

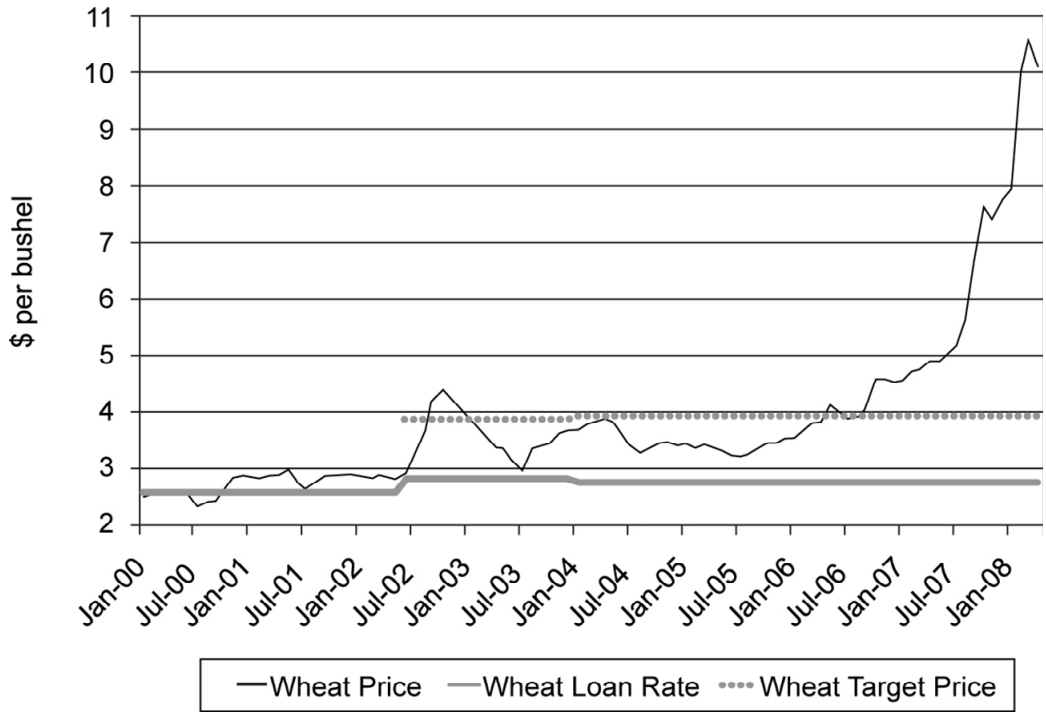

Figure 5. Wheat: Loan Rate and Target Prices

finds that the costs for 2008–2009 for biofuel support exceed US$1 billion for Iowa, North Carolina, and Texas (Elam 2008). There are at least ten states with costs ranging between US$500 million and US$1 billion.

There is little agreement on the impact of corn prices from ethanol production. At the high end, FarmEcon LLC estimated the price impact at roughly US$1.30/bushel. Gardner (2007) and Schmitz, Moss, and Schmitz (2007) put the price at below US$1.00/bushel. In this regard, caution should be used when interpreting the impact of the ethanol tax credit along with the ethanol tariff on the use of corn for ethanol. A model is badly needed that estimates the impact of these on corn demand. As we point out, given high oil prices, ethanol may well have emerged even without tax credits. Then there is the nagging issue of the impact of ethanol on food prices. FarmEcon LLC estimates that the price impact is significant, while the Agricultural and Food Policy Center at Texas A&M University argues that ethanol has a minor effect on food costs (Anderson et al. 2008). The Texas A&M study argues that corn and oil play a small role in higher food prices, and that tight global supplies are more to blame. In addition, they find that the livestock industry is struggling with passing on costs. Regardless of the goodness or badness of ethanol production, it is being fueled by many factors, including mandated ethanol blends in fuel. In a study cosponsored by the U.S. Department of Energy and the American Coalition for Ethanol, from a fuel efficiency standpoint the optimal blend of ethanol is greater than 10 percent, and a mandate greater than this level would likely absorb an even larger share of the corn crop and increase competition for livestock producers.

Canadian Agricultural Programs

Contrary to public perception, there were very few government transfers to Canadian farmers prior to the 1970s (Schmitz, Furtan, and Baylis

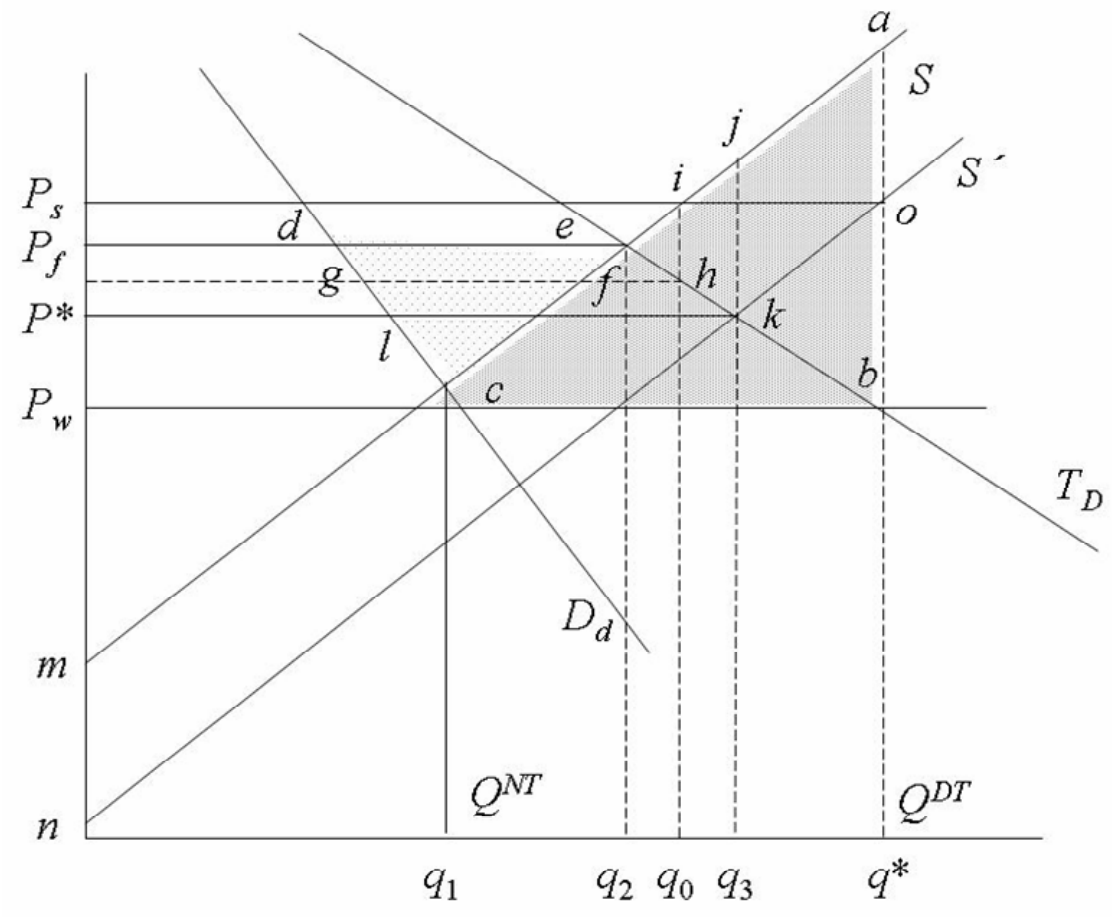

Figure 6. Multiplicative Effects of Water Subsidy and Price Supports

Source: Rossi, Schmitz, and Schmitz (2005).

2002, Fulton, Rosaasen, and Schmitz 1989). Between 1949 and 1997, transfer payments peaked in the mid-1980s at over Can$2.5 billion. After this period, payments once again increased. The numerous programs that have been put in place in Canada are documented in Schmitz (2008). The Supply Management Program covers broilers and dairy. The other commodities are covered by the Crop Insurance and Canadian Agricultural Income Stabilization (CAIS) Programs.

Farm income on the prairies has been negative for quite some time. For example, in Saskatchewan, between 1983 and 2007, farmers reported positive incomes only in 1996 (Figure 10). However, correspondingly, farm payments were positive for the negative-income years. At times, these annual farm payments exceeded Can$1 billion.

Survival of the Livestock Sector and the Crow's Nest Freight Rate (CROW)

A great deal of the discussion over high commodity prices ignores the red meat sector. This sector, which includes beef and pork, has taken a great hit because feed costs have risen significantly. This is true worldwide.

In the Canadian context, even with payouts under the CAIS program, the hog and beef cattle industries experienced heavy losses in 2007. For example, in the beginning of 2008, more than one-half of the hog establishments in Saskatchewan ceased operation. This was in part due to rapidly rising grain prices in 2007, which continued into 2008. One might question why, in the presence of the CAIS program, actual farm losses from livestock production were so large. Because

Table 2. Selected U.S. Commodities and the Importance of Trade (2002–2005)

Commodity	% of World Production	% of World Trade	% of Production Exported
Cotton	20%	40%	70%
Corn	40%	60%	18%
Rice	2%	13%	52%
Soybeans	38%	44%	35%
Wheat	9%	25%	50%

Source: Congressional Research Service (various years).

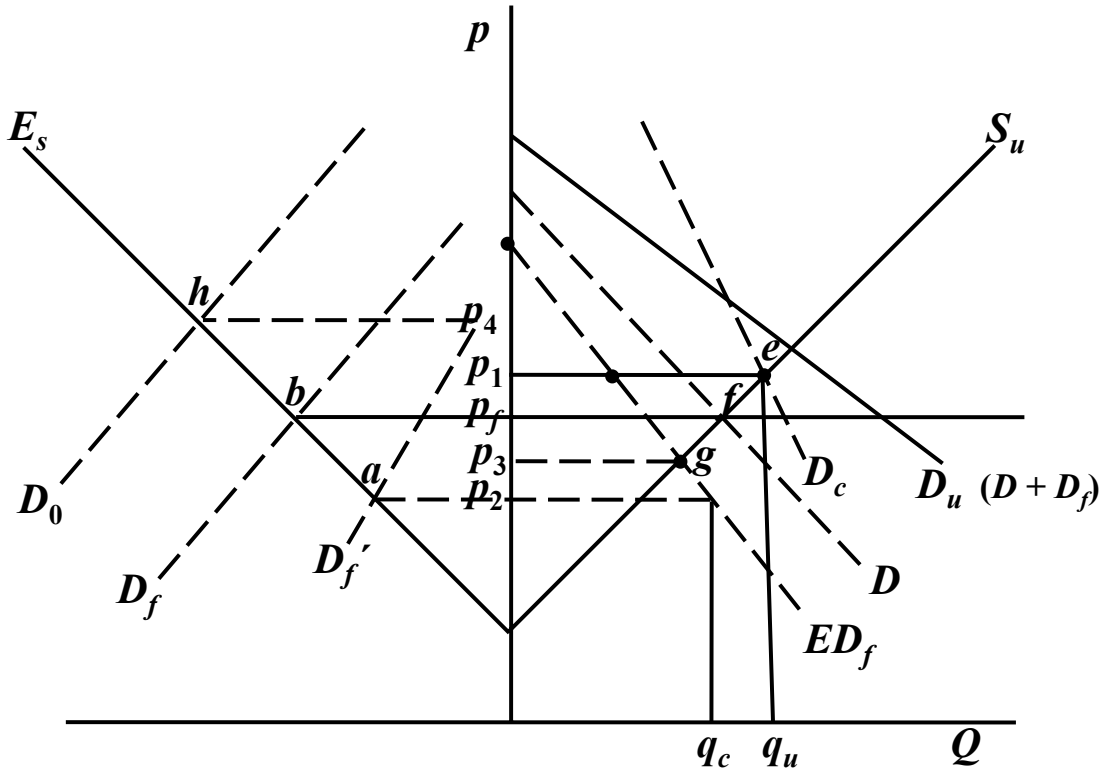

Figure 7. COOL Effects

of the seriousness of the problem, on February 25, 2008, Canada offered $3.3 billion in support programs for hog and cattle producers facing tough economic conditions. Repayable advances of up to Can$400,000 per farmer were made to establish a new sow cull program.

Coalitions For and Against the CROW Change

It is interesting to recall the debate over eliminating the CROW transportation subsidy. At the time of the intense debate in the early 1990s, many argued that its elimination would spur increased livestock production through falling grain prices. Ironically, due to many factors, the strong belief that livestock would be the savior of prairie agriculture has weakened considerably. To make matters worse, the actual payment that producers received as CROW payouts was far less than suggested by economic analysis (Schmitz, Highmoor, and Schmitz 2002). The CROW payout in 1996 totaled roughly Can$1.6 billion. Prior to

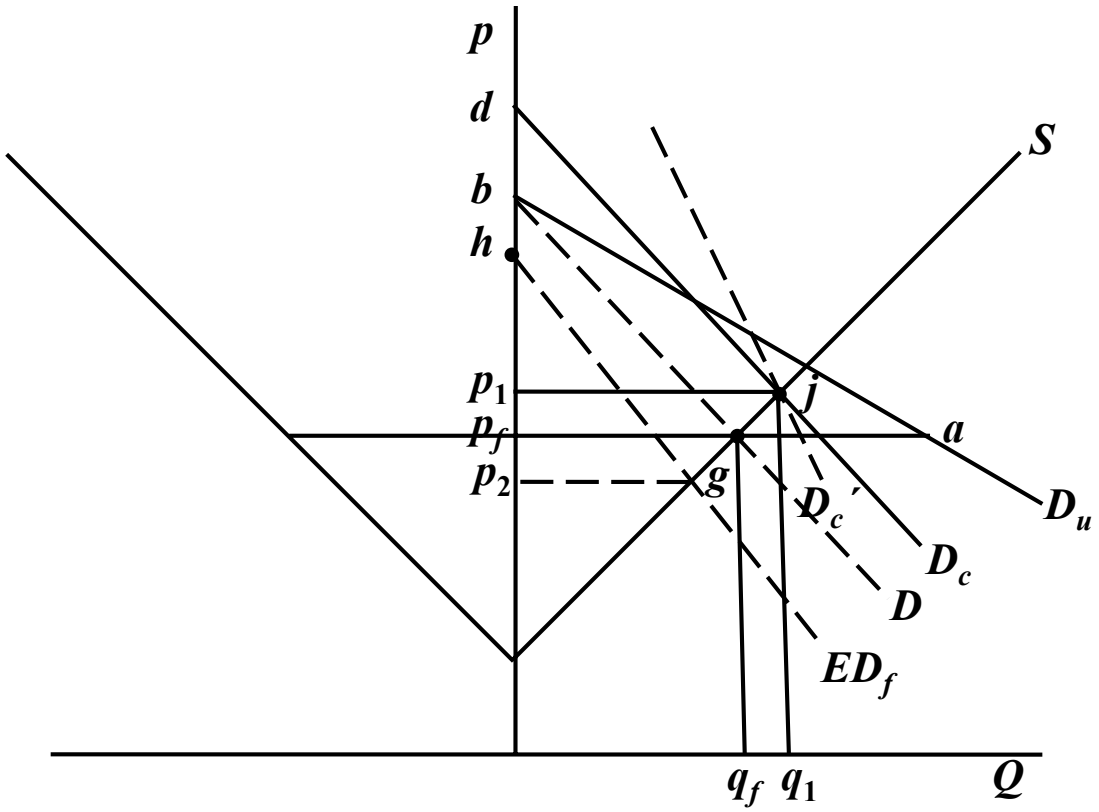

Figure 8. COOL and Consumer Perception

1996, the yearly government payments to the railways averaged Can$704.9 million from 1985 to 1995. Schmitz, Highmoor, and Schmitz (2002) calculate that full compensation would have been about Can$8.5 billion. This is in sharp contrast to the U.S. peanut and tobacco programs, where the buyout to eliminate these programs was greater than suggested by economic modeling (Schmitz, Schmitz, and Rossi 2006).

EU Agricultural Policy

When the Common Agricultural Policy (CAP) was set up in the early 1960s, the European Union (EU) was a net cereal grains importer. Over time, because of technological change and other factors, the European Union became a net grain exporter. Carter and Schmitz (1979) argued that, at least prior to 1980, the European Union imposed the optimal welfare tariff on cereal imports. Later, the European Union, as it switched from net importer to exporter, provided for export subsidies. Over time, because of technology and other factors, the European Union became a net cereal exporter.

There have been many changes to CAP over the years; they are discussed in detail in Swinbank (2008). The most recent reform is the single farm payment scheme (SFP) initiated in 2003, under which producers are guaranteed compensatory payments through at least 2013. In addition, the European Union still maintains price supports that are well below market prices. Single farm payments were designed to further the degree of agricultural decoupling in the European Union. However, even though the EU policy is more decoupled, EU producers appear to be "laughing all the way to the bank" because of the double payments: one from the government and the other from the marketplace.

High Food Prices and the Fall in Tariff and Non-Tariff Barriers

High commodity prices have caused a significant increase in the cost of food imports (Table 3).

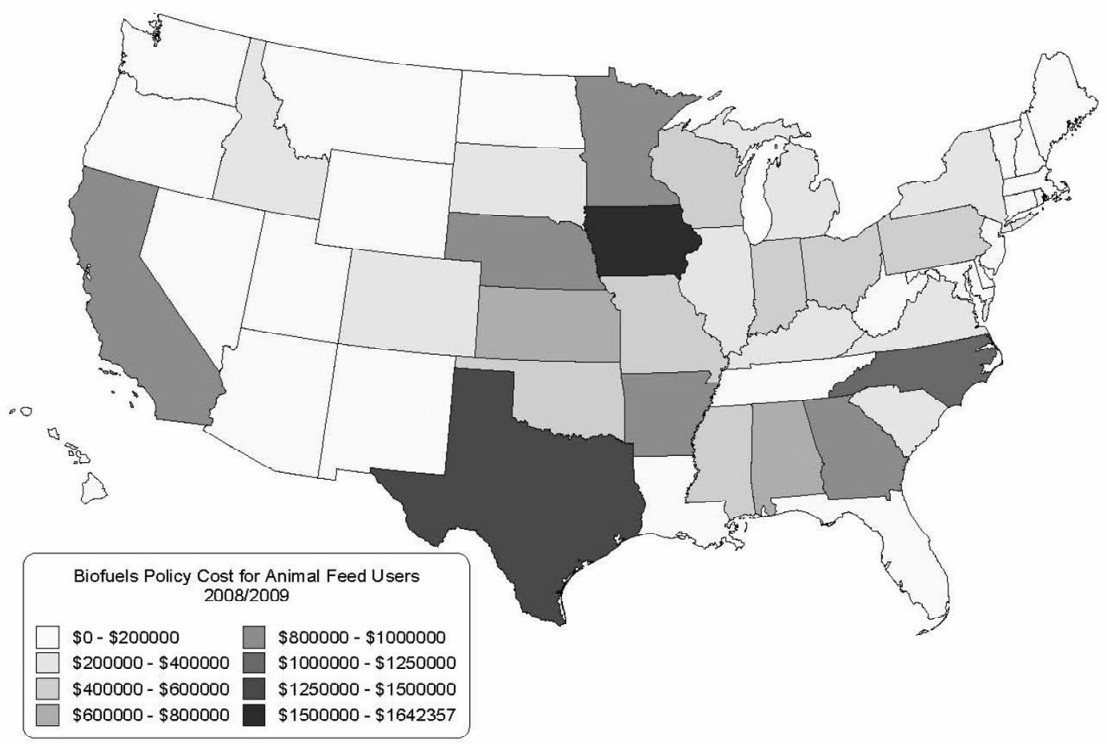

Figure 9. Ethanol and Livestock

Source: Muirhead (2008).

There has been a dramatic increase in the import bill of major food commodities, except sugar, where expenditures have actually decreased.

High food prices have resulted in lower tariff and non-tariff barriers. The following points, quoted from Benjamin and Drajem (2008), are of interest:

- The surge in world food prices is accomplishing what seven years of trade talks haven't: knocking down import barriers.
- The Doha round of global trade negotiations has been stalled since 2001 because developing nations have refused to lower import tariffs that protect their farmers and rich countries won't give up farm-price supports. Now, import duties are being slashed [globally] in response to prices that the World Bank says have risen 83 percent the past three years; subsidies in the U.S. and Europe are falling.
- Since early 2007...developing nations have taken a raft of measures to increase imports.
- India removed a 36 percent import tariff on wheat flour, and Indonesia eliminated duties on wheat and soybeans. Peru jettisoned tariffs on wheat and corn. Turkey cut import taxes on wheat to 8 percent from 130 percent and on barley to zero from 100 percent. Mongolia scrapped its value-added tax on imported wheat and flour.
- [The World Bank states that] at least 24 nations have reduced duties and value-added taxes....
- In the U.S., farm subsidies are expected to fall below $8 billion [in 2008], down from $13 billion in 2005.
- The prospect that food prices will remain relatively high in the future helps the U.S. accept lower levels of subsidies.
- High food prices.... [have] obvious benefits in terms of subsidy payments and import tariffs.
- After years of protecting domestic production of food staples by penalizing imports, places like Indonesia and the Philippines...are suddenly welcoming American rice.
- In the U.S. and EU, subsidies are [being reduced] because farm supports are based on world prices. U.S. food prices have increased 6.5 percent [in 2008].

However, on the export side, there are some offsets toward freer trade. Export duties and taxes increased in 2008. For example, Pakistan levied a

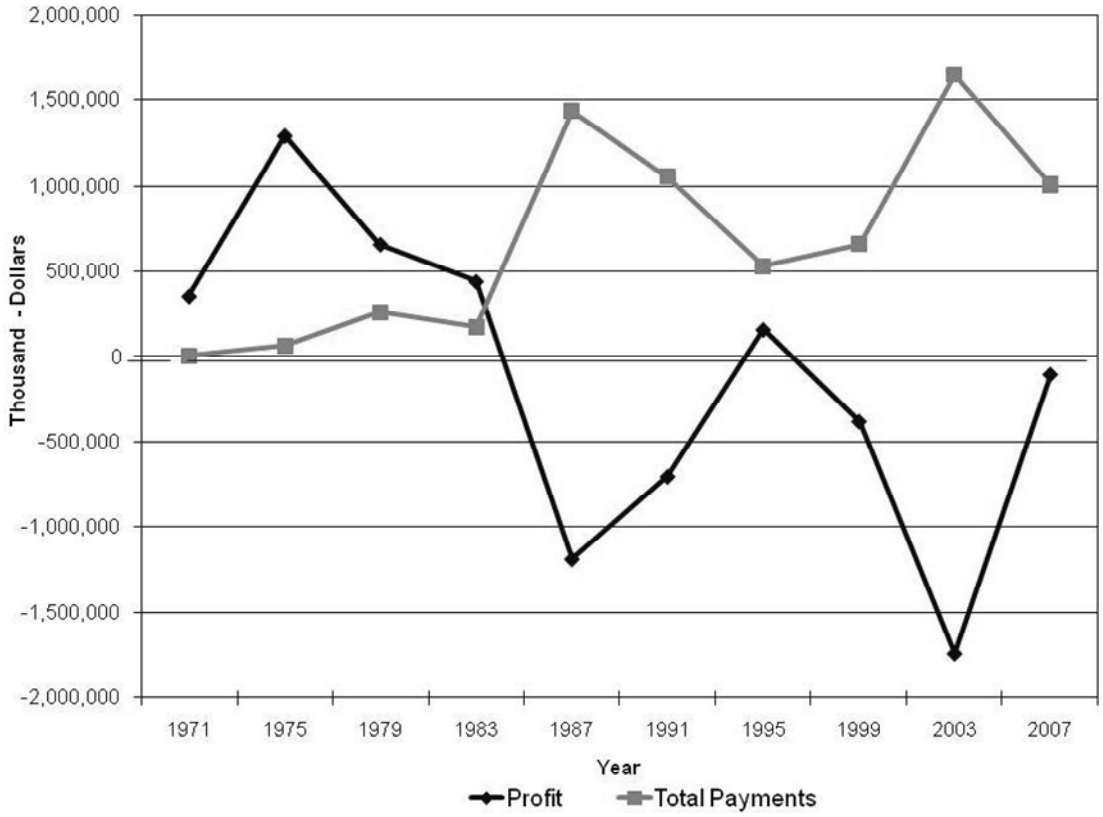

Figure 10. Saskatchewan: Farm Payments and Profits (1971–2007, selected years)
Source: Authors' calculations.

35 percent duty on wheat exports and Russia quadrupled wheat export taxes to 40 percent.

Details of selected country policy responses to high commodity prices are given in Table 4. For example, Ecuador, India, and Boliva have eliminated tariffs on wheat and wheat flour. On the other hand, China has introduced export quotas on flour made of wheat, maize, and rice. This has also been the case for the exportation of Indonesian rice.

High Input Prices and Falling Commodity Prices

The news media focuses on high commodity prices and the corresponding price increase for food. Little attention is paid to the corresponding rising input prices. Consider the very simplistic model in Figure 11. For a given price support of p_s, output is q. The consumer price that clears the market is p_c and government deficiency payments total $p_s p_c ba$.

Now suppose that the demand curve shifts to D', but that there is no change in input prices. The price increases to p'_s, deficiency payments disappear, and producers gain $p_s aa'p'_s$. But what happens if input costs also rise along with commodity prices? For a new supply curve S', which reflects rising input prices, the price increases to p. New producers gain only by an amount $pef - p_s ag$.

A detailed study is not available on the degree to which rising input costs in 2007 and 2008 affect farm production costs (e.g., fertilizer prices have more than doubled since 1970; see Table 5). We argue that variable costs for grains, oilseeds, and pulse crops have increased by at least 20 percent.

In the context of Figure 11, it is interesting to explore what happens if input costs remain high and commodity prices fall. From the U.S. per-

Table 3. Forecast Import Bills of Total Food and Major Food Commodities (2006 and 2007)

	World Countries		Developing Countries		LD Countries[a]		LIFD Countries[b]	
	2006	2007	2006	2007	2006	2007	2006	2007
	(*US$ million*)		(*US$ million*)		(*US$ million*)		(*US$ million*)	
Total food	614,887	744,777	185,529	232,814	13,362	15,937	86,473	107,236
Cereals	174,399	240,784	69,410	93,603	5,683	7,185	29,450	38,258
Vegetable oils	70,956	96,100	35,050	47,236	1,945	2,659	22,884	32,107
Dairy	43,666	71,916	12,930	21,278	801	1,302	4,924	8,115
Meat	77,865	82,447	16,806	19,034	810	915	6,013	7,317
Sugar	32,975	21,755	13,871	11,263	1,753	1,249	7,587	4,525

[a] LD countries = least developed countries.
[b] LIFD countries = low-income food deficit countries.

Source: Food and Agriculture Organization (2008).

spective, a fall in price to below the target price would trigger government payments, but such a price drop would have disastrous consequences as the target prices in the 2008 U.S. Farm Bill are in nominal terms and hence do not reflect inflation and rising input costs. For the European Union, compensatory payments along with government assistance cushion the fall in prices. In Canada, the CAIS program provides payments to producers based on an individual producer's historical income. If income falls below a threshold level based on past incomes, a government payout is triggered. Consider this program in the context of rapidly rising grain and oilseed prices. Suppose that these high prices continue for three years and then collapse. Along with the collapse would be a fall in farmers' income. This would trigger significant payouts under CAIS but would reduce government exposure under crop insurance as coverage is price-dependent. Interestingly, Canadian farmers could receive significant payments under CAIS, while their U.S. counterparts could receive little or no government payments, as falling prices may still be above the U.S. target prices (under the 2008 U.S. Farm Bill).

Conclusion

In 2008, the United States implemented a new farm program. It contains many of the same elements as the previous farm bill. However, monies were added for the fruit and vegetable sectors. In terms of support levels for the basic commodities, including corn, wheat, rice, and cotton, support levels did not increase appreciably. In real terms, price supports have fallen dramatically. In view of world market prices, the only major export commodity where price supports are binding is cotton since prices are still below target levels. It appears that the new U.S. farm program did not make progress towards decoupling since the old mechanism design for income support remains and the buyouts that did occur for peanuts and cotton were prior to the 2008 U.S. Farm Bill. The net cost of U.S. farm policy is small for grains and oilseeds but much larger for cotton and sugar (Gardner 2002, Schmitz, Furtan, and Baylis 2002, Sumner 2007).

The European Union is moving more and more towards a decoupled program since it introduced the single farm payment scheme in 2003. Correspondingly, farmers will be paid yearly compensatory payments until at least 2015. This approach has reduced the welfare costs of the CAP. However, EU farmers not only receive these payments, but also additional market rents from high commodity prices. In a sense, the EU farmers are being paid twice: once from the government and again from the market. If the single payment scheme had not been introduced, farmers would have benefited from rising prices through market payments, but government payments would have been drastically reduced (i.e., compensatory payments would not have been made—a situation similar to the United States).

With the sharp rise in commodity prices, several observations are of importance. With respect

Table 4. Some Selected Country Policy Responses

Countries	Reduce or Eliminate Tariffs	Reduce or Eliminate Consumer Taxes	Increase Export Levies	Quotas	Reduce Export Licenses or Ban Exports	Fix Consumer Prices
Argentina			Corn levies increased to 25%, and wheat levies to 28%		Stopped maize export permits	
Azerbaijan		Eliminated VAT on grains				
Bangladesh	Reduced tariffs of rice and wheat imports by 5%					
Bolivia	Eliminated import duties on wheat, rice, and maize				Banned wheat exports	
Brazil	Considering removal of tariffs on wheat					
Cameroon		Eliminated VAT on rice				Fixed prices of rice
China			Introduced export levies on wheat, oats, buckwheat, and barley by 10%; increased wheat flour and starch, maize, sorghum, millet, and soybean levies	Introduced export quotas on flour made of wheat, maize, and rice		
Ecuador	Eliminated tariff on wheat and wheat flour					Fixed bread prices
Egypt						Raised food subsidies
European Union	Suspended import duties on cereals (excluding buckwheat, oats, and millet)					

cont'd.

Table 4 (cont'd.)

Countries	Reduce or Eliminate Tariffs	Reduce or Eliminate Consumer Taxes	Increase Export Levies	Quotas	Reduce Export Licenses or Ban Exports	Fix Consumer Prices
Honduras					Introduced export ban on maize	
India	Eliminated tariffs on wheat and wheat flour					
Indonesia	Eliminated tariffs on wheat and soybeans					
Morocco	Reduced tariffs on cereals					
Mexico	Removed tariffs on maize, pulses, milk, and sugar			Removed quotas on maize, pulses, milk, and sugar		
Pakistan				Imposed levies on exports of wheat and wheat flour	Banned private exports of wheat to Afghanistan	
Peru						Considering subsidizing bread prices
Republic of Korea	Reducing tariffs on wheat and maize; eliminating those on soybeans and feed maize					
Turkey	Reduced tariffs on wheat and maize; eliminated tariffs on barley					

Source: Food and Agriculture Organization (2008).

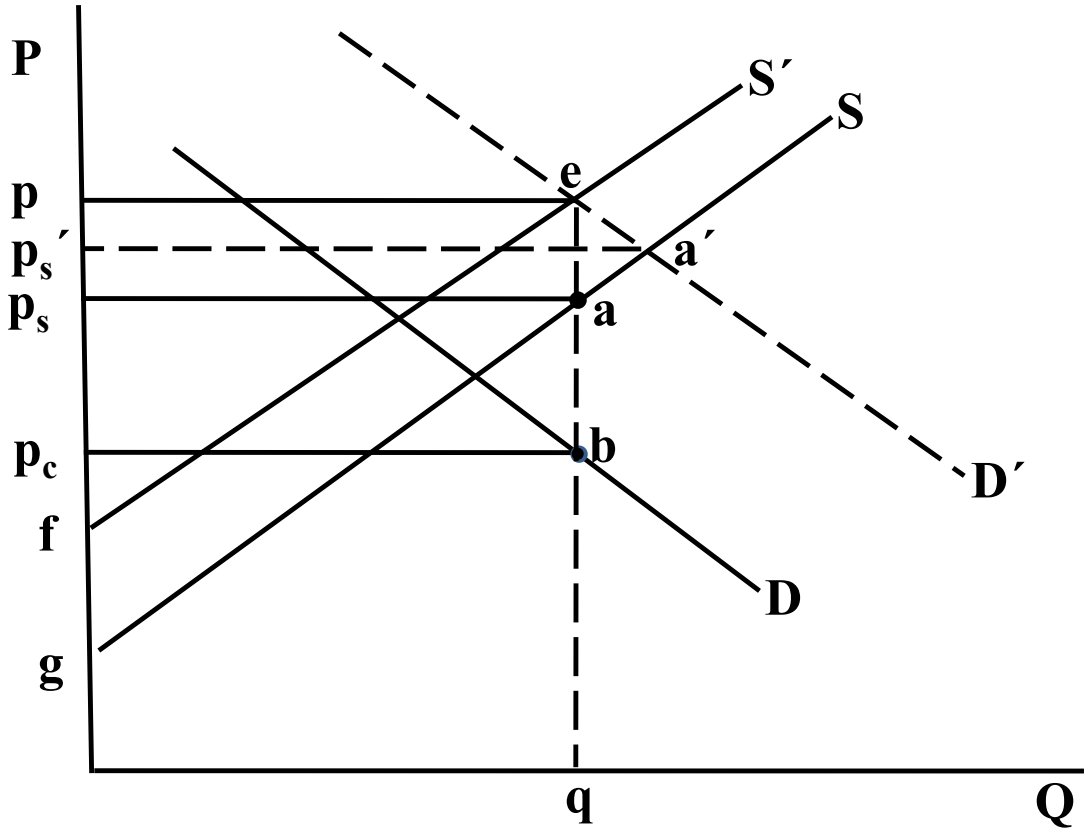

Figure 11. Rising Commodity Prices and Input Costs

to the European Union, what level of support remains since the support levels upon which compensatory payments were made are no longer binding. If prices fall to old levels, the threshold prices will once again become binding. Second, given high commodity prices, the welfare costs of the U.S. and EU policies have been greatly reduced. In addition, the treasury outlays have been greatly reduced. For example, in the United States in 2008, except for direct payments, cotton will be the only major commodity receiving government payments. (As of November 1, 2008, the price of U.S. cotton was roughly 30 cents per pound below the target price.)

Some contend that high commodity prices are now moving the world toward freer trade—something that trade negotiations have not been able to do. However, freer trade brought about by higher commodity prices has much different welfare implications than freer trade brought about by the removal of distortions caused by farm subsidies. In standard analysis, the prices of commodities under price support systems fall for exporters in the move toward freer trade. However, in today's reality, this may no longer be the case, because commodity prices in exporting countries have risen along with the removal of trade and policy distortions.

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Table 5. U.S. Average Farm Prices Paid for Selected Fertilizers (1970–2007, selected years)

Year	Anhydrous Ammonia (82% N)	Nitrogen Solutions (30%N)	Urea (44–46% N)	Ammonium Nitrate (33% N)	Superphosphate (44–46% P205)	Diammonium Phosphate (18% N, 46% P_2O_5)	Potassium Chloride (60–62% K_2O)
	(in dollars per short ton)						
1970	75	54	83	60	75	94	51
1975	265	153	244	186	214	263	102
1980	229	134	221	165	247	297	135
1985	255	143	221	192	206	244	126
1990	199	132	184	180	201	219	155
1995	330	169	266	223	234	263	155
1996	303	182	278	233	258	294	153
1997	303	160	257	227	257	272	152
1998	253	134	195	193	253	264	163
1999	211	128	176	181	255	264	168
2000	227	131	200	194	233	240	165
2001	399	189	280	260	236	244	170
2002	250	127	191	195	221	227	164
2003	373	161	261	243	243	250	165
2004	379	178	276	263	266	276	181
2005	416	215	332	292	299	303	245
2006	521	232	362	366	324	337	273
2007	523	277	453	382	418	442	280

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