Picking on the Poor

How US Agricultural Policy Hurts the Developing World

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Introduction

The United States is a major producer, exporter, and importer of agricultural commodities, and US supplies and demands affect global markets. Pervasive policy surrounding US agriculture, therefore, has the potential to influence outcomes globally for those who demand and supply agricultural products. Many of those affected by US trade and domestic agricultural policies are among the poorest people on the planet.
In many ways, US agricultural policy is harmful to the global poor. Farm-commodity and related subsidies reduce world prices, especially when prices are already low. Ethanol and related demand-side policies raise world prices, especially when prices are already high. Global prices thus vary as a consequence of US policies that sometimes have larger effects on production and sometimes on demand. In addition, US agricultural policies (including trade policies) also make international agreements on reductions in trade barriers more difficult to finalize, further increasing price volatility and postponing the economic benefits of freer trade. US policies that thwart the implementation of global trade agreements—as well as the perception that the United States does not honor agreements it signs—tend to make other countries less willing to negotiate with the United States, further limiting gains from trade for the poor. Regulations related to such issues as food safety, traceability, and country-of-origin labeling all have the potential to restrict gains from trade and add to trade barriers facing poor farmers.

Some provisions of US agricultural legislation are simply misplaced. Since the early 1950s, US agricultural policy has consistently included food aid shipped to poor countries as emergency aid and as longer-term assistance. Neither of these objectives, even if sound, has any useful connection to agricultural policy in the United States. Indeed, tying the delivery of emergency nutrition or development aid to US agriculture is likely to interfere with the effective provision of services.

Finally, some elements of US agricultural policy benefit the poor. Research and development (R&D) policy stimulates agricultural productivity growth for farm producers able to innovate and lowers food prices in the long term.

**Historical Context**

For many decades, the United States has subsidized farm commodities and farm inputs, maintained trade barriers, and generally involved government in the management of agricultural production, marketing, and trade. Almost four decades ago, D. Gale Johnson titled his classic book on the topic *World Agriculture in Disarray*. Even earlier, Johnson foreshadowed the conflicts among US agricultural farm policy, trade policy objectives, and relationships with other countries. Agriculture in both poor and rich countries has evolved rapidly. In some ways, agricultural policies distort markets less now than they did decades ago. But many remaining distortions continue to harm poor farmers and food consumers.

A typical small cotton farm in Africa would have gained more than $100 per year if US programs had not depressed cotton prices.

US agricultural policies encompass myriad government subsidies, taxes, and regulations, including those applied on the farm, throughout the input and output marketing chains, and at the border. Agricultural policy in the United States is far broader than the Farm Bill, and the Farm Bill is far broader than farm policy. For example, food-safety policy and nutrition policy were each revised in 2010. For decades, skeptics have advanced arguments in favor of fundamental policy change for agriculture. However, despite the lack of convincing rationales for their continuation, US farm commodity programs and related policies remain after more than seven decades. Recent arguments for policy change have included pressures to comply with international trade rules and the negative impacts of US policy on the world’s poor. Nonetheless, farm commodity subsidies, protection, and related policies were largely reinforced and—in areas such as disaster aid and commodity support—expanded in scope by the 2008 Farm Bill.

Many US agricultural policies continue to have implications for global markets and affect prices, incomes, and costs facing poor farmers and
consumers around the world. This paper reviews some major policies and summarizes some of their most important impacts.

**Farm Commodity Subsidies**

US commodity policies include farm income subsidies, producer price support through government payments and guaranteed purchases, subsidized yield and revenue insurance, and related efforts. Farm commodity subsidies alone comprise dozens of individual programs and provisions that differ by commodity and that defy simple summary.

All the main commodity programs provide additional revenue to producers, especially when market prices are low. Some payments are tied directly to market prices and quantities produced, others are tied to market prices but not to current output, and still others are tied to past production and prices. Of course, the base production used to determine payments may be updated in legislation, as in 2002. Related programs provide revenue assurance based on a combination of crop-yield and price variations.

All these subsidies stimulate the output of program crops in the United States—mainly grains, oilseeds, and cotton—by increasing expected revenues and smoothing returns. Program specifics are too complicated to detail here, but the bottom line is that transfers from taxpayers (and, in some cases, consumers) to US producers and landowners stimulate output, especially of bulk crop commodities.

The specific impact of US subsidies on global commodity markets depends on (a) the amount of expected revenue enhancement provided, (b) the degree to which such subsidies provide a supply incentive, (c) whether prices are expected to be low relative to government-set prices or per-acre revenues that trigger payments, (d) the US supply response of the affected crop to improved revenue prospects, (e) the share of US production in relevant global markets, (f) the supply response in other countries to a change in the market price, and (g) the nature of global demand for the product, especially whether substitutes are readily available.

The economic logic behind policy and market characteristics (a) through (g) may be sketched briefly. Programs that are expected to transfer large subsidy payments per unit and that affect production naturally tend to stimulate US output. Large subsidy payments and impacts are present when market prices tend to be low because some programs tie subsidy payments inversely to market prices. The effect on US production is more significant when US producers respond strongly to revenue incentives, that is, when they exhibit significant supply elasticity. An increase in US supply only affects world markets when US production commands a sufficiently large share of the world market. Finally, the responsiveness of global suppliers and demanders to a change in market prices, conditions (f) and (g), determines the relative effect of US subsidies on prices or quantities. The more inelastic the response of producers and consumers to a lower price, the more US subsidies drive down world prices. The more elastic the response, the more US subsidies restrain quantities produced and consumed elsewhere. Introducing these policy and market conditions into simple economic models yields assessments of the degree of distortion caused by US subsidy policies and which are most likely to place competing poor farmers at a significant disadvantage.

The US cotton program is the clearest case of a US commodity program that has depressed world prices and reduced farmer incomes in poor countries. US cotton has received an especially large share of revenue from government payments (about half of total revenue in many years) and has a large production share (20 percent in many years) and export share (about 40 percent) in world markets. The result is a significant potential to depress world prices for a crop that millions of poor farm families in Asia, Africa, and South America rely on for cash income. Based on these key facts and economic relationships and after years of contentious litigation, the World Trade Organization (WTO) found that the US cotton program failed to comply with US
obligations under the General Agreement on Tariffs and Trade (GATT). After the United States refused to bring its programs into compliance with the agreed obligations, the WTO awarded Brazil rights to withdraw trade concessions for US exporters to Brazil that are worth hundreds of millions of dollars based on the negative impacts of US cotton subsidies on the Brazilian cotton industry.

By delaying a WTO agreement, US farm policy has reduced the well-being of the poor in poor countries by billions of dollars.

Using the same general approach and ranges of parameters as applied by Brazil in its WTO litigation and documented in Sumner, Alston, Sumner, and Brunke show the significant negative impacts of US cotton subsidies on income prospects and potential consumption for poor cotton farmers in West Africa. They find that, even after accounting for relatively large marketing margins within Africa, a typical small cotton farm would have gained more than $100 per year if US programs had not depressed cotton prices. Clearly, $100 per year is not enough to transform agriculture for even the most affected farmers in the poorest countries. However, given the depth of poverty of many cotton-farming families who live on as little as one or two dollars a day, any additional income significantly affects living standards. Recent application of similar models confirms that cotton subsidies continued to have significant impacts on world prices and revenues of cotton producers outside the United States up to the recent period of very high cotton prices that began in 2010.

Based on policy and market characteristics, programs for other crops have likely had smaller world market impacts than the US cotton program. For example, US soybean subsidies have tended to be lower than cotton subsidies as a share of revenue, reducing their impact on world soybean prices. Until recently, US rice subsidies were a very large share of revenue, comparable to cotton, but the share of US rice in the world market is quite low. Other crops, such as corn and wheat, have typically had lower subsidy rates than cotton and smaller shares in the applicable global feed and food-grain markets.

The United States has also spent billions of dollars over the past decade on crop-yield and revenue insurance subsidies and programs such as disaster payments. These policies also stimulate production of the crops (and production in the regions) with high subsidy rates. These programs allow US producers to compete in commodity markets even when variable market revenues might otherwise encourage a shift of resources to other activities. Because of the breadth of coverage, insurance and disaster payment programs encourage US production and dampen world prices for a wide range of farm products, including some fruits and vegetables that have not been eligible for the standard commodity subsidies. Crop insurance and related subsidies provide benefits by limiting losses from production shortfalls even when farm commodity programs provide only small benefits. That means they encourage crop production in regions where variable returns would otherwise limit planting.

For food crops, while US subsidies that depress market prices disadvantage net producers in poor countries, they often benefit net consumers, some of whom are also producers and many of whom are also poor. Naturally, because they compete directly in markets for unprocessed commodities, farmers in poor countries are more directly affected by US farm subsidies than consumers who buy retail food products. Nonetheless, commodity price reductions that benefit poor food consumers are an important consideration when crafting agricultural policy.

During the time of high commodity prices that have been in place for many crops since 2007, US farm subsidies have had relatively little potential to increase US production and suppress world prices because price-based payments are low when market prices are high. That means that in periods of high prices, US subsidy programs do little to moderate
price spikes. However, when prices are likely to be already low, US programs tend to reduce prices further by encouraging more production than market signals alone would stimulate. The result is that US subsidy programs increase the amplitude of global price fluctuations.

Farmers (and consumers) in poor countries face these price fluctuations mostly without the option of much government support. This results in severe losses for farmers in years when US programs exacerbate already-low prices and results in distress among consumers when the withdrawal of subsidies in high-price years causes prices to go even higher.

By increasing commodity price fluctuations, US farm subsidies have also had an indirect but important impact on food and agricultural policy in poor countries. Governments in poor countries use US agricultural policy as a rationale to restrict exports to encourage self-sufficiency in the name of national food security. They also tend to expand imports suddenly to ensure access to supplies. Such policies tend to export additional price fluctuations. The period of commodity-market flux since 2007 provides examples of such reactions.

**Import Protection and Export Subsidy**

US import protection remains particularly important for a few commodities, most notably sugar (although the world price rose so much in 2010 that even US tariffs that had kept the internal US price at about double the typical world price were no longer prohibitive). When world sugar prices are already low, US protection for sugar tends to depress those prices even more, to the disadvantage of producers in poor countries. Remaining dairy and beef tariff-rate-quota protection has been low relative to world and domestic prices in recent years. While remaining on the books, these import tariffs would become important only if global prices fell substantially. Tariff or tariff-rate-quota protection remains for a handful of other products, including some fruits and vegetables, but it is no longer a broad feature of US agricultural policy. US export price subsidies have not been applied in recent years, except for dairy products in years with low world prices and for a few minor products such as raisins.

Export credit guarantees have remained potentially important for major export commodities and operate to the disadvantage of competitors from poor countries, who do not have the backing of their governments to provide credit guarantees. The US Department of Agriculture “GSM” export programs provide US government guarantees for loans made to selected foreign buyers of US commodities. These guarantees allow buyers to pay lower interest rates to finance purchases of US export products compared to market rates facing these relatively risky borrowers from eligible countries. The result is that buyers benefit, while US exporters also benefit from additional sales at price premiums that can remain above market prices because the credit subsidy compensates buyers for the difference. The net effect is more production and exports from the United States, lower world market prices, fewer exports by competitors, and costs to US taxpayers who fund the associated subsidies.

The WTO cotton case addressed US export credit programs for a range of commodities in addition to cotton. A series of dispute-resolution panels and the appellate body all ruled that the US credit subsidy programs violated WTO obligations and caused harm to Brazil as an exporter of agricultural commodities. After the United States had exhausted all its appeals, the WTO quantified the impacts and found that the US export credit guarantees caused hundreds of millions of dollars in damages to Brazil’s producers. As with the cotton subsidy rulings, the United States chose not to comply with the WTO instructions to remove the violations; instead, it is paying annual cash compensation to Brazil. That means producers and exporters remain disadvantaged in the world market by the continued operations of the US programs.

As with production subsidies, export credit programs have mixed effects on the world’s poor. Insofar as they facilitate lower-cost imports, buyers in
poor countries gain. The result can be lower food prices or more access to raw materials and capital that stimulate employment. Of course, a more direct approach to helping the poor would be to provide direct capital-market assistance to firms in poor countries and not tie that aid to the purchase of US commodities.

**Biofuels Policies**

US biofuels policies stimulate demand for US farm output and divert resources from producing food to producing biofuels. As detailed by Knittel, US biofuels programs include tariffs on imported biofuels, tax provisions that increase demand for ethanol, and mandates that require fuel refiners to include a share of ethanol in their blends. Government policy has created a large and inelastic demand for ethanol made from corn and, to a lesser extent, biodiesel from soybeans.

This demand increase contributes to higher food commodity prices. The resulting higher food prices have had dire consequences for poor consumers. The prolonged increase in food commodity prices from 2007 to 2011 has been caused partly by the increasing and increasingly inelastic demand for biofuels feedstock based on US policies. By blocking imports, these programs also restrict bioenergy production in the most cost-effective places and thus increase resource diversion from food production.


A further consequence of US agricultural policy follows from the direct impacts on world prices and the competitive position of producers in poor countries. Even the US proposals for the Doha Development Agenda WTO negotiations would require changes in US agricultural subsidies to ensure compliance. Since the early days of the Doha negotiations, officials from poor countries have pointed to rich-country farm subsidies as an important impediment to reducing their own import barriers. By delaying a Doha agreement, US farm policy has reduced the well-being of the poor in poor countries by billions of dollars.

The indirect impacts of US agricultural policy, operating through the negotiating position of the United States and the responses of other WTO parties, may be as important as any direct influence on world prices and quantities.

**Regulations That Reduce the Competitiveness of Agricultural Exports from Poor Countries**

As protection from standard agricultural tariff and quota barriers has declined, other potentially protectionist measures have garnered more attention. It is important to consider the impacts of these regulatory barriers on the market access of farmers in poor countries to the US market. This section considers food-safety regulations and mandatory country-of-origin labeling (MCOOL).

WTO provisions related to sanitary, phytosanitary, and other technical barriers generally require that measures designed to protect health and safety and address other legitimate government objectives must be applied in ways that restrict trade at most minimally to achieve the objectives. Under the GATT principles of “national treatment,” rules must be applied evenhandedly in dealing with imports and comparable domestic products. The WTO agreement on technical barriers to trade has similar provisions. In general, countries may use regulations to protect health and safety and meet other domestic objectives, but the global trade rules restrict the use of such policies as “disguised” or indirect protectionist measures.

In the United States, regulations that apply to characteristics of domestic products usually also apply to imported products. For example, section 8e of the Agricultural Marketing Agreement Act of
1937 imposes regulations on imports where those regulations apply to domestic products. Under section 8e, regulations imposed on imports must not be discriminatory against imports, and an investigation procedure is established to ensure compliance. The concern is that seemingly evenhanded rules, such as minimum sizes or other product standards, may be designed in a way to disadvantage imported products, while providing no benefit to consumers.

For example, the US government has a legislative mandate to help facilitate safe food supply to the US market. However, in meeting this objective, sound policy dictates avoiding rules that raise costs or discriminate unduly among suppliers, unless the food-safety improvements compensate for the other impacts. Among many other provisions, the Food and Drug Administration Food Safety Modernization Act of 2010 provides for additional information to accompany the importation of food products. Information requirements, such as traceability through the production and marketing chain, may be routine in rich countries and even in some poor countries with well-developed export-oriented industries. The problem is that many poor countries do not have the appropriate infrastructure to trace products from farm to exporter. Moreover, it is more costly to comply with the information requirements of traceability when farms are very small and producers have little formal training, even if the imported product is actually safe and of high quality. Thus, import regulations created in the guise of food safety may become indirect trade barriers that limit competition from small low-cost farms and exporters from poor countries. No evidence is yet available on the specifics of new food-safety rules or their effects on poor countries, but this is an issue that must be monitored closely to prevent undue discrimination.

Regulations affecting market access by poor-country agricultural exporters are also derived from the 2002 and 2008 Farm Bills, which authorized and revised MCOOL for several types of fresh produce, seafood, and fresh meat items. The official rationale for MCOOL is simply to provide additional information to aid consumers in their product choices. The rationale for mandatory rules usually leaves unexplained why marketers themselves would fail to provide this information if there were sufficient consumer demand. Moreover, MCOOL regulations are explicitly not related to food safety because the US government maintains that border inspection and other policies are the appropriate instruments to adequately guarantee a safe food supply for US consumers.

MCOOL may place producers and exporters from developing countries at a disadvantage. One concern is simply that consumers will discount products because they are produced in poor countries. Of course, if significant numbers of consumers were willing to pay more for a product based on domestic origin, marketing firms would have a strong incentive to provide that information. However, Kuchler, Krissoff, and Harvey find that data do not support this consumer reaction. They find in demand estimation that, where there has been substantial negative publicity about imports, US buyers of seafood respond to many product characteristics and market conditions, but have not increased their relative valuation of shrimp based on domestic origin.

The implementation of MCOOL for meats was delayed until provisions were revised in the 2008 Farm Bill. Some of the delay related to the decision to label meats based on where animals were born and reared, rather than where the livestock was processed and the consumer meat products were “produced.” Some US livestock producer groups objected to suggested requirements that animals be tracked individually from birth, through the slaughter operation, and to the retail outlets to

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document the country of origin. They seem to have expected that such requirements would only be applied to imported animals. Of course, it is impossible to document if an animal is born and reared in the United States rather than Mexico or another country without tracking animal movements. As implemented in 2008 and 2009, MCOOL requires only periodic certification of origin from US producers for the livestock they supply to the next step in the marketing chain (say, from farrowing operations to feeding operations or from feedlots to slaughter facilities).

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To label meat accurately by origin of the livestock, animals from different origins must be processed separately and products must be labeled by origin at the point of slaughter. Then, the labeling must be maintained through the rest of the marketing process. For large, mechanized meat-packing plants where individual animals are slaughtered and processed rapidly, separate processing means that animals from different origins are processed in separate production runs. Since imports are a small share of the total number of livestock in the supply chain, imports are processed at a few plants on specific days or at specific times. Plants that use no imports avoid segregation and scheduling costs. In fact, after the implementation of MCOOL for meat, many plants and retailers decided to eliminate their use of imported animals to simplify compliance with labeling rules. The added costs of using imported livestock reduce demand for imports, even when consumers have no concern for the country of origin. Thus, MCOOL may create a protectionist barrier to which exporters from relatively small developing countries are especially vulnerable.

For many years, Mexico has participated in the North American cattle market by supplying young feeder calves that were subsequently reared on pastures in the United States along with calves born in the United States. These animals and comparable animals born in the United States enter feedlots for finishing before being processed into meat for the US market. The finished animals and the retail meat products are indistinguishable from comparable animals born in the United States that receive similar feeding and processing. The implementation of MCOOL disrupted this fully integrated market and caused US cattle feeding and slaughter operations to separately identify Mexican-born calves. The largest added costs appear in the processing and retailing stages, where meat from Mexican-born cattle is segregated so a separate label may be applied. Mexico has claimed that it has faced significant reductions in access to buyers willing to use cattle born in Mexico and that prices of imported feeder cattle shipped to the United States dropped because of MCOOL.

As a result, Mexico claimed that the United States violated its obligation in the WTO, and a dispute-resolution panel was established in May 2010. Mexico (and Canada, which filed similar claims related to cattle and hogs) presented written submissions and oral testimony for the WTO-organized panel hearings held in September and December 2010. The confidential preliminary panel ruling was circulated in May 2011 and, according to press reports, was favorable to Mexico’s claims. US appeals will likely follow.

The MCOOL issue is important because it represents another form of import policy that may limit access without the explicit use of tariffs or import quotas. Farmers in poor countries are especially vulnerable to these policies because they may incur high costs in meeting arbitrary standards that favor US producers. Moreover, if MCOOL regulations are allowed to impose added costs on buyers of imported raw materials, the result will be fewer imports and lower prices for imported materials even when quality is identical.

A WTO dispute is one approach to dealing with discriminatory implementation of MCOOL, but using the dispute-resolution process has three limitations. First, a policy may limit import access and
harm poor-country exporters without being found in violation of WTO obligations. Second, the United States demonstrated in the cotton case that even when found in violation of its obligation, it may not bring policies into compliance. Third, as the cotton case demonstrated, even if one country wins a case and receives benefits, this does not benefit others facing similar policies, unless they participated directly in the litigation. A better approach is for the United States to maintain open market access because it is simply good policy.

**Food Aid Is a Relic of Policy-Created Farm Surpluses That No Longer Exist**

US food aid has been a regular feature of agricultural policy and the Farm Bill debate since the Agricultural Trade Development and Assistance Act of 1954. Even before that, ad hoc assistance was provided to those in need with commodities from US government stockpiles. The initial rationale for food aid was threefold: (1) to reduce stockpiles of commodities acquired by the government through price-support activities and to generally help support US commodity prices by creating additional demand where no commercial demand would occur, while introducing potential future customers to US commodities; (2) to help the process of economic development in poor countries; and (3) to assist those in dire need of basic nutrition.

In recent decades, changes in US commodity programs—including the gradual elimination of government stockpiles—and the WTO agreement proscribing the use of food aid as a way to subsidize the export surplus commodities have radically changed the policy environment for food aid. There are no longer commodity-program or export-dumping rationales for food aid. Moreover, the use of food aid for development assistance has proved inefficient. The remaining potential rationale for food aid is humanitarian assistance.

To supply food aid, the US government buys food commodities and ships them to places to be delivered to those in need or provided to organizations that sell the food to acquire funds for development projects. Specialists separate food aid into broad categories of emergency food aid and “developmental” food aid.

No one claims that it makes much sense for the US government to buy and ship food from the United States so it can then be donated to organizations that sell it to finance development projects. Clearly, if such projects are appropriate for US taxpayer support, they should be funded directly with money rather than indirectly through the veil of “food aid.” At best, food is an inefficient mode of finance. Eliminating monetization of food and the broader practice of using food as development assistance would substantially reduce the role of food aid and shift the debate back to the effectiveness of US development assistance in general.

Food subsidies to families in poor countries may be a useful part of economic development. For example, school lunch programs may encourage education, and helping mothers with nutrition of infants may reduce stunting and delayed brain development. But such programs are part of the overall efforts of governments and others to stimulate economic development and serve the poor. And, of course, they are unrelated to food shipments from the United States.

Temporary shipments of food are widely accepted as useful in emergencies when food markets have ceased to operate. In this context, food is like emergency water supplies, medical services, and other requirements for survival and is a natural part of a package of emergency humanitarian assistance. The United States has played its part in providing such assistance for many years and in many disasters. Continued US participation in helping during food emergencies is not at issue. The policy question is how to make that participation as effective as possible.

Several especially costly restrictions on US food aid apply to both emergency food aid and developmental
food aid. One of the most egregious restrictions is the requirement that food be purchased from US suppliers even when it would be more timely and cost-effective to procure the food closer to where it is used. A second costly restriction is that shipments must use US-flag vessels, typically at very high costs. These and related restrictions mean that less than half of the US food aid budget goes toward food, compared to much more than half from other donors such as Canada or members of the European Union.

The consensus of the recent literature is that US programs are not an appropriate way to finance development assistance and are an immensely wasteful way to help the hungry in times of emergency. Analysts who support continued US food aid make two arguments that are essentially political. First, the terrible waste of the emergency food assistance operations is a necessary evil because the political clout of US companies that process, package, and ship food from the United States is required to gain congressional approval for any emergency assistance in the first place. The claim is that without support from these firms, Congress would authorize less humanitarian aid than current levels, even given wastage of half the budget. However, evidence of humanitarian giving from US citizens and the US government during international disasters suggests that Congress would be more forthcoming with food assistance if presented with the case in a straightforward way.

The second argument is that there is so little political support for development assistance for poor countries that a suitable budget can only be obtained by hiding development assistance in the food aid budget. This is clearly not a recipe for effective and transparent policy. Again, development assistance needs to be debated on its merits, not funded through policy obfuscation.

The best that can be said for US food aid programs is that they are not as bad as they used to be. Gradual reforms have reduced local agricultural distortions in poor countries and government-subsidized export competition that distorted world markets. Nonetheless, food aid remains an expensive, wasteful, and corrupt way to attempt to fool taxpayers and some policymakers into subsidizing US shipping companies and nongovernmental charities in the name of helping the hungry in poor countries.

**Agricultural R&D Policy**

A gradually declining real price of food has been the source of the most important improvement in the diets and living standards of the world’s poor. Long-term productivity growth has been faster in agriculture than in the rest of the economy and has driven down the relative price of food. Agricultural productivity growth has derived partly from investments in and improvement of farmer education and skill and farm and marketing infrastructure. But the most important driver of farm productivity growth has been agricultural R&D.

The underlying rationale for government support for agricultural R&D is that benefits are shared widely and often cannot be captured fully by the sponsor of the research. This reasoning applies most forcefully to more basic research that is broadly applicable and technologies or techniques that cannot be adequately protected by patents or other ownership rights. Moreover, since beneficiaries of agricultural R&D are spread widely across the population, especially among food consumers, there is an argument for broad-based funding sources. These conditions mean that private incentives to invest are below the social returns for many forms of agricultural R&D. Moreover, benefit-cost ratios for publicly funded agricultural R&D are consistently estimated to be in the double digits, indicating substantial underfunding. Over many decades, much of the relevant R&D has been funded by and conducted in public institutions in wealthy countries. And, because the United States remains the largest funder and performer of agricultural R&D, US agricultural R&D policy is vital for the world’s poor.

The world population is set to grow by about 35 percent before peaking in about sixty years.
Global income growth indicates more demand for animal-based foods and horticultural crops, and a lower share of staple grains in the human diet (although more total grain demand when we include livestock use). Increased demand for agricultural output implies more demand for investments in food commodity productivity growth. Funding productivity-enhancing agricultural R&D in the United States is therefore a major concern for the growing population of potentially hungry people. A sound policy to enhance US and global agricultural productivity is one positive contribution that the 2012 Farm Bill can make to the world’s poor.

Agricultural policies in the United States and other rich countries have reduced the prospects for WTO negotiations to open markets and stimulate income growth among the poor.

Sound R&D policy begins with devoting adequate public funds and policy attention to agricultural R&D. In the United States, the federal government supports agricultural R&D conducted at federal laboratories and other facilities, as well as at other institutions, most importantly public universities. State governments in the United States, mainly through support for public universities, play an even larger role than the federal government. But evidence from rate-of-return studies shows that additional funding would generate large payoffs in productivity growth to the benefit of consumers, farmers, and farmland owners in the United States and elsewhere.

One problem with securing adequate R&D funding in the United States is that the productivity growth induced by R&D spills over to other states and other regions of the world. Spillovers in the payoff relative to the funding source naturally reduce the incentives for funding by a single state or even a single country. Unfortunately, the global institutions for agricultural R&D have proved inadequate. One way to deal with at least some of the underfunding and spillover concern is to fund commodity-based agricultural R&D with commodity-specific taxes or levies. As the R&D improves productivity, the incidence of benefits across producers and buyers is well aligned with the incidence of levies. Of course, given the long period between research investment and payoff, many of those who pay the levies will no longer be in the market to enjoy the benefits and will be represented instead by their heirs. Some form of tax relief for the poor could reduce their share of payment for R&D for which they would otherwise be responsible through commodity prices.

R&D policy that helps the world’s poor consumers requires allocating R&D funds to projects that most effectively improve productivity growth. Modern agricultural science covers the full spectrum from the laboratory to the field. The most effective lab science and much of the field research may be conducted wherever the best scientists are most productive and where they can be stimulated to work on important issues. In practice, this means that much work relevant to poor farmers and consumers may take place in the United States, with final stages of field testing and adaptation undertaken in relevant agronomic and climatic zones.

Allocation across topics is another important issue that has emerged in recent decades. For example, environmental concerns, such as local water quality and global climate change, have commanded increasing shares of public R&D funds and effort by agricultural scientists. With little or no real R&D budget growth, support for food crop productivity growth has not kept up with demand. More recently, as biofuels have become more important, agricultural R&D devoted to bioenergy has taken increasing shares of the research effort. R&D on bioenergy may pay off, but unless the resources available for agricultural science are increased substantially, the result is lower productivity growth for food commodities. These developments jeopardize the long-term downward trend in real food prices and have severe potential consequences for hunger among the poor.

Finally, agricultural R&D policy is best suited to help the poor if it generates the largest contribution
to productivity growth and therefore lowers food prices and generates real income growth for poor farmers and consumers. This can be achieved best by eliminating many of the specific rules surrounding R&D funding. For example, requirements to distribute federal funds to specific states, to multi-state or multidisciplinary projects, or to specific institutions are especially counterproductive. If the objective of highest expected payoff is maintained in the funding evaluation process, other constraints on research support are at best superfluous and are more likely harmful.

Final Remarks

This paper has reviewed some areas where US agricultural policy can be changed to offer positive benefits to the world’s poor. Farm commodity subsidies—including price and income supports—crop insurance subsidies, and disaster aid encourage US production and disadvantage farmers who attempt to compete with subsidized production from the United States. These programs stimulate more production when market signals indicate otherwise, which pushes prices lower when they are already low. The programs withdraw subsidies when prices are high, which allows prices to rise even more. Thus, US policies contribute to more variable prices in world commodity markets. Import protection and export subsidies, including export credit programs, have similar impacts. Demand-side subsidies and mandates, especially for bioenergy, also contribute to price spikes that severely affect poor consumers.

The whole complex of agricultural policies in the United States and other rich countries has also reduced the prospects for WTO negotiations and other agreements to open markets and stimulate income growth among the poor. Besides encouraging a protectionist negotiating position, protecting farm subsidies has caused the United States to refuse to comply with obligations of past agreements. Both of these side effects of farm programs tend to reduce US credibility in international negotiations and have helped deny the world the benefits of freer trade.

In addition to tariffs and quotas, access to the US market by producers in poor countries may be restricted by regulations that have discriminatory effects on imports. Marketing regulations, food-safety regulations, and MCOOL all have the potential to limit access to US food and agricultural markets in the name of consumer information, health and safety, or other potentially legitimate rationales. The challenge is that domestic producers also have a strong incentive to use such policies as lightly disguised protection from import competition. US agricultural policy must carefully uphold its international commitments to treat imports in an evenhanded way in competition with domestic industries.

Rationales for including food aid as part of US agricultural policy became obsolete decades ago. Farm programs do not generate surpluses that must be dumped into otherwise-unavailable markets. Given this fact, humanitarian food aid should be included in humanitarian aid authorizations with as few restrictions as possible as to the procurement and distribution of aid. Using the food aid budget to expand development assistance has no appropriate policy justification. The most direct solution to these concerns is to eliminate food aid as part of agricultural policy and the Farm Bill.

US agricultural R&D policy has contributed and continues to contribute to improved farm productivity in the United States and globally and to lower food and other commodity prices in the long run. There is a strong rationale for additional funding. Given the urgency of the objective, there is also a strong case for removing restrictions that divert funds to less important projects and to modes of R&D that yield lower returns.

The author contributed economic analysis to Brazil on the WTO cotton case and to Canada on the WTO country-of-origin labeling case. The views expressed here are his own and not those of any institution with which he is affiliated.
Notes

7. Ibid.
9. Randy Schnepf, Brazil’s WTO Case against the US Cotton Program (Washington, DC: Congressional Research Service, June 30, 2010).
19. Sébastien Pouliot, “Food Safety: Background, Analysis, and Recommendations.”
22. US Trade Representative, “Certain Country of Origin Labeling (COOL) Requirements (Mexico).”
US agricultural policy influences global supply and demand. Many of those adversely affected by current US trade and domestic agricultural policies are among the poorest on the planet. This paper examines how US agricultural policy can be changed to benefit the world’s poor. The findings include:

1) **US agricultural policies distort world market prices**: These programs encourage production when market signals indicate otherwise, thus exacerbating global price fluctuations. Subsidy programs tend to reduce worldwide commodity prices, hurting farmers in the developing world. A typical small cotton farm in Africa would have gained more than $100 per year, about 5 percent of its annual income, in the absence of US subsidy programs.

2) **Export credit programs contribute to more variable prices in the world market**: International buyers and exporters benefit from government-subsidized sales at above-market prices. The net effect, however, is more production and exports from the United States, lower world market prices, fewer exports by international competitors, and increased costs to US taxpayers who fund these subsidies.

3) **To protect farm subsidies, the United States has refused to comply with obligations in past international trade agreements**: As a result, US taxpayers pay Brazilian farmers $147.3 million annually because of the negative impacts of US cotton subsidies on the Brazilian cotton industry. US allegiance to farm programs reduces its credibility in international negotiations and denies the world the benefits of freer trade.

4) **Agricultural import regulations limit access to US food and agriculture markets**: Food-safety regulations and mandatory country of origin labeling (MCOOL) create excessive costs for small farmers. Many poor countries do not have the infrastructure to trace produce from farm to exporter, so MCOOL may indirectly create a protectionist barrier to trade. A better approach is for the United States to maintain open market access because it is simply good policy.

5) **Food aid policies are expensive, wasteful, and outdated**: The original “export dumping” rationale for food aid no longer exists, and the use of food aid for development assistance has proved inefficient. Less than half the US food aid budget goes toward food; most goes to shipping costs to send US food aid overseas. Food aid as a part of agricultural policy should be eliminated from the Farm Bill.

6) **US agricultural R&D policy is vital for the world’s poor**: It has improved farm productivity in the United States and globally and lowers food and other commodity prices in the long run, with benefit-cost ratios in the double digits.