

# What's at Stake in the Next Trade Round



Photo courtesy World Trade Organization

If there were ever a time for speculation about the future direction of agricultural policy, this is it. Major new farm legislation represents a departure from the market orientation and lower spending levels of the last Farm Act. The next round of multilateral negotiations begins in earnest later this winter. The intersection of domestic and international agricultural and trade policy determines the framework in which agricultural markets operate. What will happen to this architecture in the next few years? Will it be altered through trade liberalization and policy reform? Or will it remain largely intact?

Among the many factors that will condition the path policy ultimately takes are the dynamics of the trade talks themselves. Since the end of the last trade round, developing countries have sought a more effective influence on the World Trade Organization and negotiations under its auspices. Will their quest for meaningful participation and increasing technical proficiency make a difference in the outcome of the next round? What will the European Union (EU) and Japan ultimately be willing to negotiate in the way of reform?

Such considerations are important, but the fundamental question, in terms of U.S. enthusiasm for reform, is whether liberalization is really in line with the self-interest of American farmers. From this perspective, it is worth considering which economic arguments are most compelling and how they can be developed in an effective way.

A well-reasoned argument about market gains is a necessary but perhaps not sufficient condition for marshaling substantial U.S. support for agricultural trade liberalization. That is why the future cannot be predicted with confidence. Domestic farm policy reform, including reductions in subsidy spending and in import protection, would impose costs of adjustment in moving to a new world market order. Future benefits might not be real-

ized if nearer term dislocations caused by policy reform could not be overcome—a real possibility. But, even if significant adjustment costs were associated with multilateral trade liberalization, is maintenance of existing programs and spending levels a viable alternative?

## Developing World Is Source of New Markets

The most compelling argument for trade liberalization is that the future of developed-country agriculture lies in the markets of the developing world. Why is this so? Because food markets in developed countries are mature—that is, they grow only slowly with population growth. Expansion in market share of one food product generally comes at the expense of another. So the future, if U.S. farmers want to sell more food, is with markets in developing countries, where income growth has strong implications for the level and composition of food demand. In economic terms, domestic U.S. demand for food is stable. In order to maintain returns to agriculture as productivity rises, demand also has to increase. This growth must come from outside the U.S., and indeed from outside the developed world (e.g., the EU).

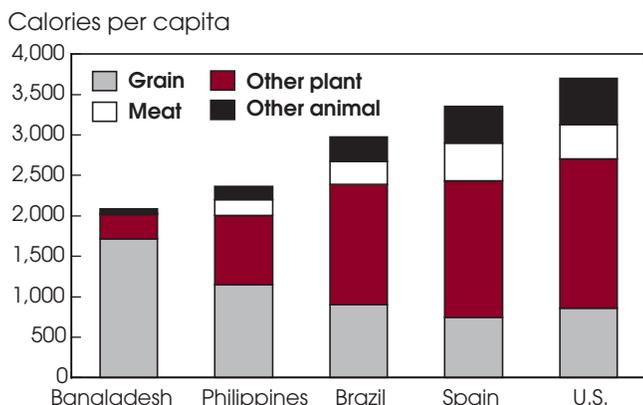
Income growth drives demand in developing countries. Trade liberalization can be an important catalyst for improving incomes as well as for freeing markets by improving market access and limiting subsidies that distort market signals. To recognize the dynamism that drives income growth requires an approach to economic analysis that differs from traditional considerations of the gains from freer trade. The feedback loops in an economy, from consumers to suppliers to investors, have to be considered in order to trace the boost that open markets give a country's well-being. Typically, economic gains from agricultural trade liberalization have been couched in terms of changes at the margin in commodity imports and exports. This is not an unimportant phenomenon, of course, but to ignore the larger economic impact and its course over time is to miss the opportunity to make one of the strongest cases for agricultural trade reform.

The bedrock of the story is the relationship between food demand and income. One of the facts of economic development is the change in level and composition of food consumption as the incomes of a nation's population change over time. This phenomenon can be considered in the aggregate, by looking at country consumption profiles, but a national perspective necessarily obscures differences in the distribution of food across households and individuals. Two important observations flow from looking at amount and composition of calories consumed per capita across countries. One is that overall calories consumed increase with income. The second is that the composition of the diet also changes, incorporating needed protein through such foods as meat and animal products as income grows.

The change in diet can be viewed in a more dynamic way, keeping the focus on aggregate country level and paying particular attention to meat demand, to see how world market dynamics are determined. As a country moves up the income ladder, the popu-

## Special Article

### Composition of Diet Changes as Per Capita Income Grows



Economic Research Service, USDA

lation's willingness to spend additional money on food (and on meat) changes. At low levels of income, the income elasticity of demand for meat is very high—meaning consumers' meat consumption will strongly increase with income—but the elasticity declines with income growth (diets need balance). The budget share of food expenditures that goes to meat increases with income. Empirical evidence gathered in many countries over many decades confirms the existence of a strong structural force that fuels demand for meat products, or inputs to the production of meat. This fundamental relationship between income growth and food demand is known as Engel's Law. Consistent with the evidence, the International Food Policy Research Institute projects that by 2020, 85 percent of the increase in global demand for cereals and meat will occur in developing countries, and demand for meat in the developing world could potentially double.

### Developed Countries' Competitive Edge: Livestock & Food Grain Production

To complete the market picture, consider the supply side. Which countries produce the most livestock and/or feedgrains that food animals consume? The answer is many developed countries, and the U.S. in particular. Not only do the U.S. and its developed-country competitors in these markets produce livestock and feedgrains, but they also have a competitive edge in doing so. The expansion in the share of meat exports relative to cereals in the value of developed-country agricultural exports between 1960 and 2000 is illustrative. The most rapid expansion has been in recent decades, which would not be expected unless these producing countries had an inherent advantage.

The apparent advantage of the U.S. and other developed countries may be due in large part to their "head start" in food animal production given their abundant high-quality resource base (land availability) and high feedgrains yield. The need to satisfy domestic consumer demand for meat arose around the middle of the last century with strong gains in affluence. Developing countries, then, might be expected to "catch up" at some point in the future by building their own domestic livestock industries. However, the tropical and subtropical settings of many developing

### Changing Mix of Developed-Country Exports Reflect Growing Global Demand for High-Value Products



Product-group shares of agricultural exports of developed countries  
Source: Foreign Agriculture Organization of the United Nations.  
Economic Research Service, USDA

countries present challenges in management of animal disease in the large herds that currently characterize low-cost meat production. Low feedgrains yields and constraints on water availability may hinder more extensive production systems in some areas.

### Trade Liberalization As Growth Catalyst

How to promote income growth in developing countries—a tall order indeed, but here the focus is on the potential contribution of trade liberalization. The "three pillars" of agricultural trade liberalization are: 1) increases in market access through lower tariffs, 2) eliminations of export subsidies, and 3) elimination of domestic subsidies that distort markets. What effect would successful multilateral agricultural trade liberalization have on the prospects for income growth in developing countries?

To answer that question, we use a dynamic computable general equilibrium (CGE) model, one that captures all transactions in the circular flow of income among economic actors in an economy. This framework also permits tracing the flow of income from producers to households, government, and investors and finally back to demand for goods in product markets. The model provides projections for individual commodity imports and exports but also for the full economy over time. The results show the expected increase in the value and volume of both imports and exports for developing countries that arise largely from improvements in market access. Such results are familiar parts of the debate over gains from freer trade, but they tell only part of the story.

The picture changes when considering potential welfare and income gains and how they accumulate over time. Estimates of gains from agricultural trade liberalization are shown under different assumptions about the increases in developing countries' total factor productivity (TFP) that can occur as a result of reform, in addition to gains from investment incentives. The productivity gains come about from spillovers of developed country technology into developing countries that in turn yield increases in labor productivity and returns to land and social capital. This growth then attracts additional capital investment from external sources. Varying assumptions about the magnitude of this change

in productivity are illustrative. With no productivity increase, these gains are associated only with the commodity trade changes, and they do not increase with time. However, as TFP increases, there are more significant gains in welfare, and they compound over the years.

While projection of anticipated TFP growth is challenging, these results dramatize its significance and the importance of appropriate technology transfer to developing countries. Future income gains would be driving the level and composition of diet change, toward demand for higher quality protein from meat animals.

To recap, trade liberalization has the potential to accelerate income growth in developing countries. It is income growth that drives change in demand for food, both in terms of total calories consumed and in the source of calories, and that favors an increase in calories derived from meat and animal products. This change in demand can and often does result in demand for imports of livestock products and/or derived demand for feedgrains. The U.S. is a highly competitive exporter of meat products and feedgrains; its advantage would only be enhanced by reform, given our ample resource base.

If the focus of trade liberalization benefits is only on immediate changes in commodity trade levels, an important gain is overlooked. There is good reason to expect trade liberalization to support income growth in developing countries, and some of this income will assuredly be spent on more food and, in particular, on a diet upgrade to meat proteins. This source of demand expansion is a significant source of opportunity for U.S. producers who otherwise face a stable and mature domestic food market.

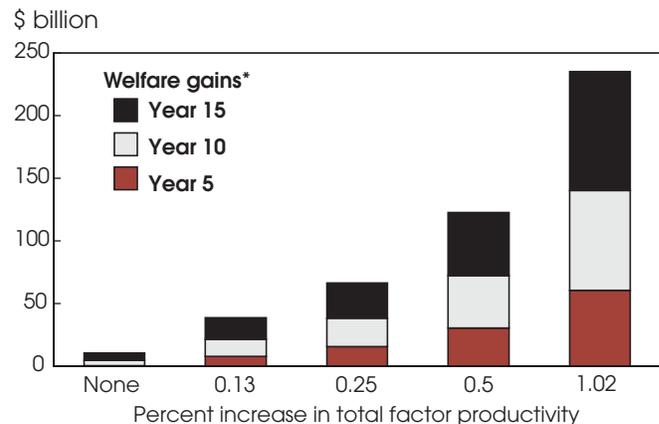
### From Here to Liberalized Trade

The strong positive relationship between income growth and food demand is a well-established lesson of economic history. But even if the future prosperity of U.S. agriculture does lie in developing-country markets, there remains the question of how to get from here to there. What might the path of adjustment to freer world agricultural markets look like?

It seems reasonable to assume that successful trade liberalization will require the U.S. to reduce its domestic spending on agriculture and to loosen import restrictions; indeed, that is what the U.S. has itself proposed. In that case, the deflation of farmland values could likely be the biggest challenge to adjustment.

ERS research has shown that the value of government payments has been capitalized into land values; nationally, about 15-20 percent of value is derived from the ability of landowners to garner government payments. Deflating farmland values would represent a cost of adjustment that would likely be felt before the full gains from expanded exports began to accrue. But expectations about future returns also affect farmland values; while reductions in subsidies might have a depressing effect, recognition of the future potential for market expansion might buoy values. In order to be realistic in assessing prospects for U.S. farmers' support of trade liberalization, the time lag between the costs and benefits of trade and policy reform should be considered.

### As Productivity Rises in Developing Countries, Gains in Welfare Increase Over Time



\*Welfare gains defined as the increase in purchasing power due to productivity change.

Economic Research Service, USDA

But there are those who, perhaps disappointed by the results of previous trade rounds, will consider it misguided to pin hopes for U.S. farm prosperity on developing countries' uncertain prospects for economic growth. In that case, one has to consider the alternative to trade liberalization. That is, can returns to the U.S. agricultural sector be maintained by government programs in the absence of market expansion?

The level of payments in the 2002 Farm Act are comparable to the level of payments made in the preceding 4 or 5 years, which included those mandated by the 1996 Act and those subsequently enacted as supplementary assistance. This spending occurred in a context in which Federal budget surpluses were present and expected into the foreseeable future. But now the Congressional Budget Office is predicting deficits through the end of the decade. Faced with the prospects of red ink, Congress and the President have in the past agreed to restrain spending across many Federal programs, including agricultural programs. How will projected spending under the 2002 Farm Act fare in such a constrained environment?

Much is at stake in the next trade round. While attention is most frequently trained on commodity-by-commodity impacts of trade liberalization, the most compelling economic story lies with the potential for income gain in developing countries. The long-observed relationship between increases in income and spending on food—Engel's Law—is one of the few tenets in economics that seems to hold over time and across countries. Still, even a compelling structural argument for trade liberalization has to acknowledge the costs of adjustment in reaching reconfiguration of world agricultural markets. To be serious about handicapping the prospects for reform will require serious thought about how to get from the current policy structure to the next. **AO**

Susan Offutt (202) 694-5000 soffutt@ers.usda.gov

Agapi Somwaru (202) 694-5295 agapi@ers.usda.gov

Mary Bohman (202) 694-5140 mbohman@ers.usda.gov