Third World Ag Development Effects on U.S. Ag Exports:
It Depends...

by Donald C. Taylor

■ The Brazilian experience demonstrates that there is not a simple yes or no answer to the question, "Does U.S. assistance to Third World countries hurt or help U.S. agriculture?" The answer is that usually such assistance helps U.S. agriculture. However, the Brazilian experience demonstrates that it is important to examine specific commodity experiences, as well as the experience of U.S. agriculture as a whole.

Some Third World countries achieving sustained agricultural economic development have become increasingly active and dependable importers of U.S. agricultural products. Some people, however, argue that international assistance to agriculture will create competition for U.S. farm exports. The interconnections among foreign economic assistance, Third World agricultural economic health, and the positive expansion potential for U.S. agricultural exports have been stressed by others. Jim Houck was an early contributor to this debate in the First Quarter 1987 issue of *CHOICES.*

The Basic Logic

Increased demand for food, especially cereal grains, in Third World countries is much more dependent on increases in income than on either increases in population or the existence of famine. As Yotopoulus has shown, the effects of increased incomes on the demand for feedgrains and oilseed meal for livestock consumption is remarkably high in middle- and high-income Third World countries. This relationship forces us to examine closely how income growth can be stimulated in these countries.

The basic premise used to support international assistance to agriculture to increase U.S. farm exports is as follows: agricultural development progress in Third World countries, resulting most basically from enlightened domestic policies and resource allocation, can be catalyzed by foreign agricultural economic assistance. Economic and income growth in most lower income countries depends heavily on agricultural development. Such development leads to increased food production, but it also stimulates income growth which enables increased food consumption.

An essential part of the logic is that agricultural development involves expanded employment opportunities, both within and outside agriculture. This expansion in employment brings added purchasing power into the hands of low-income farmers and wage-earners. A large portion of the added purchasing power is used for added food purchases.

This relationship between employment, income, and food demand is reflected in aggregate production and trade data. While part of the added food demand in Third World countries is met through added domestic production, part is also met through added food imports. In fact, middle- and high-income Third World countries represent the only sizeable growth market for internationally traded agricultural commodities during the 1980s.

Until now, the case for positive linkages among foreign economic assistance to agriculture, Third World agricultural economic health, and added growth potential for U.S. agricultural exports has been established largely within a macro-analytic policy perspective. The aggregation has commonly extended across both countries and commodities.

The Brazil Example

In this article, we examine the Brazilian experience. The focus is on the degree to which the macro-policy linkages between foreign agricultural economic assistance and agricultural exports holds up for the three most important commodities in Brazil's and the U.S.' international agricultural trade portfolios (namely, soybeans, wheat, and corn). The analysis is based primarily on United Nations and USDA agricultural trade and production data for 1970-1986.

Soybeans is Brazil's farm produced commodity that experienced the most spectacular growth over the past three decades. One stimulus to this growth was U.S. economic development assistance in the late 1950s and early 1960s. Average annual soybean production in Brazil increased from 290 thousand metric tons (mt) in 1960-64, to 4.0 million mt in 1970-74, to 14.9 million mt in 1982-86. In just over 20 years, Brazil moved from being almost totally insignificant to ranking second after the U.S. in world soybean production.

What has happened to Brazil's exports of soybean meal and oil? From 1970-74 to 1982-86, they increased 6-fold and 24-fold, respectively, as shown in Table 1. Average annual soybean meal exports increased by 6.5 million mt. Average annual soybean oil exports increased by 718 thousand mt.

Table 1. Brazil's trade exports of soybeans increase

	Five-year average 1970-74	Five-year average 1982-86	Change from 1970-74 to 1982-86
	Million metric tons		
Soybean meal			
Exports	1.3	7.8	Up 6.5
Soybean oil			
Net exports	.03	.7	Up .7
Soybeans			
Imports	.003	.4	Up .4
Exports	1.0	1.6	Up .6
Net exports	1.0	1.2	Up .2

Thus, Brazil has become a major competitor in international soybean product markets. Brazil's share of world exports for soybean meal increased from 17 percent in 1970-74 to 37 percent in 1982-86 (Table 2). Their share of world exports of soybean oil went from 3 percent to 24 percent. The U.S. has been dislodged by Brazil as the world's largest exporter of soybean meal and oil. Furthermore, between 1970-74 and 1982-86, the net value in real dollars of Brazil's soybean product, soybean, wheat, and corn exports to the world, in the aggregate, increased on the average about $900 million/year (nearly three times).

The macro-policy conclusions regarding the positive interconnection between U.S. foreign economic assistance and

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Table 2. Brazil's Share of world exports of soybean meal and oil increases

Average five-year world export share

	1970-74	1982-86
	Percent	
Soybean meal		
United States	59	26
Brazil	17	37
Soybean oil		
United States	53	22
Brazil	3	24
Soybean meal equivalent [1]		
United States	78	52
Brazil	12	21

[1] "Soybean meal equivalent" exports reflect overall soybean and soybean product trade. In calculating the export equivalent shares, the quantities of soybean exports for the U.S. and Brazil were multiplied by a soybean-to-meal factor of 0.79 and added to the respective quantities of soybean meal.

U.S. agricultural exports appear to be contradicted by these developments. The U.S. chose to technically support Brazil's agricultural development some three decades ago. Brazil's remarkable agricultural economic progress since then, however, has enabled Brazil to overcome the U.S. as the world's major exporter of soybean meal and oil.

A Broader Question

Nevertheless, a broader question remains: Has Brazil's exporting success with soybean products been detrimental to U.S. agriculture as a whole? Depending on one's perspective, the answer may be yes or no.

If one looks at U.S. soybean oil and soybean meal exports to Brazil and to Brazil's exports of these products, the answer is yes. What Brazil has achieved in expanded shares of the world soybean market has been largely at the expense of the United States. In this sense, Brazil's economic progress with soybeans has been to the detriment of U.S. soybean producers and exporters.

But an examination of aggregate numbers suggest that the answer is no. Brazil's net balance-of-trade with the world in soybean products, soybeans, wheat, and corn in the aggregate improved greatly between 1970-74 and 1982-86. So also did the U.S. balance of trade with Brazil for these same commodities. The average annual increase was $185 million, or 85 percent for the entire period. Further, during this same period of time, total U.S. agricultural exports to Brazil increased 60 percent and U.S. exports of soybeans and soybean products to the world increased 35 percent.

Globally, between 1970-75 and 1980-85, the real value of Brazil's total agricultural imports increased by 17 percent (in 1982 dollars, from an annual average of $1.6 billion in the early 1970s to $1.8 billion in the early 1980s). The principal underlying explanations are Brazil's 80 percent increase in wheat imports—for which the U.S. is the dominant supplier (60 percent of Brazil's total wheat imports in the 1980s)—and Brazil's shift from being a net exporter to a net importer of corn (Table 3).

This broader examination of Brazil's trade supports the logic that U.S. foreign agricultural economic assistance can have both positive and negative effects on U.S. agriculture.

Table 3. Brazil's imports of wheat and corn increase and corn exports decrease

	Five-year average		Change from 1970-74 to 1982-86
	1970-74	1982-86	
	Million metric tons		
Wheat and wheat flour Imports	2.2	3.9	Up 1.7
Corn			
Imports	.002	.6	Up .6
Exports	.6	.3	Dn .3
Net exports	.6	-.3	Dn .9

Economic growth and international trade are not zero-sum games. Economic development in middle-and high-income Third World countries is one of the single most important contributors to the world's expanding "economic pie." The piece of pie for one country need not necessarily become smaller when the piece of pie—or even the proportion of the total pie—for another becomes larger.

The absolute size of the U.S.'s pieces in the world soybean-wheat-corn economic pie have been helped to grow because (not in spite) of economic development in Brazil and other middle-and high-income Third World countries. Brazil's strengthened economic position—due in part to its progress in soybean production, processing, and exports—has not been a detriment, in absolute terms, to U.S. soybean producers and exporters or U.S. agriculture as a whole.

Thus, the question "Does U.S. assistance to Third World agriculture development hurt or help U.S. agriculture?" can't be simply answered yes or no. It depends, with two primary factors being whether the criterion for "hurt" and "help" surrounds absolute or relative country participation in international markets and the degree to which international market commentators represent narrowly versus more broadly defined constituent interests.

A Dilemma

The Brazilian example highlights a dilemma that U.S. policymakers often encounter. What may be best from the perspective of U.S. agriculture as a whole and even from some standpoints for an aggregate commodity area such as soybeans, isn't necessarily perceived as best by more narrowly defined commodity interest groups—in this example, exporters of soybean products concerned about the U.S.'s dwindling shares in the international markets for soybean meal and oil. This dilemma is compounded because adverse effects on exports of very specific commodities are more likely to stimulate political action than are the more delayed, dispersed, and positive effects on broader groups of U.S. agricultural producers. C