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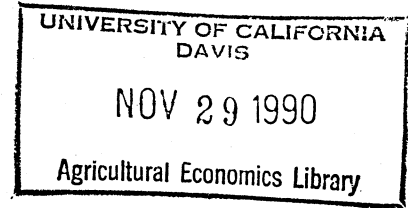
THE 1990 FARM BILL AND DEVELOPING COUNTRIES

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INTRODUCTION

Developed countries employ an array of agricultural policies with the objective of achieving such national agricultural goals as stabilizing prices, protecting rural income, guaranteeing fair prices to producers, and ensuring food security. These policies affect world commodity prices and agricultural trade. For example, many developed countries support prices above world levels, a practice which stimulates domestic production and encourages exports. As a result, world prices are lower, affecting producers and consumers in other countries. One study of developed-country multilateral liberalization shows that in 1986 developed country agricultural support costs producers from developing exporting countries \$5 billion and producers from developing importing countries about \$13 billion. (5)¹

Industrialized countries whose agricultural policies affect the world market, particularly those of the United States, are of much concern to developing countries (LDC's). Later this year, the 101st U.S. Congress will renew omnibus agricultural legislation, the 1990 Farm Bill, and important changes in U.S. agricultural policies might be forthcoming.

Two major forces that could affect the outcome of the 1990 Farm Bill are the General Agreement on Tariffs and Trade (GATT) negotiations and the U.S. budget deficit. In the past, neither

¹Numbers in parentheses refer to sources in the reference section.

had been of major concern. But with the Uruguay Round of the GATT negotiations slated to be complete in December 1990 and the Gramm-Rudman-Hollings restrictions looming larger, there could be substantial changes in the 1990 Farm Bill.

This paper analyzes two possible options that U.S. policy could take in the 1990 Farm Bill and compares them to a projected 1991/92 reference base. First, it analyzes what would happen to LDC agriculture if the United States imposed a \$10 billion budget ceiling. Then it analyzes what would happen to LDC's if the United States unilaterally liberalized its policies.

ISSUES

One major force influencing the 1990 Farm Bill is the GATT negotiations which are scheduled to end in December 1990. The tension and conflicts that resulted from agricultural trade distorting practices (price supports, export subsidies, tariffs, etc) and the corresponding budgetary expense put agriculture in a central place in the Uruguay GATT Round. Countries have been reluctant to accept international discipline for domestic agricultural programs. Thus far in the Uruguay Round, governments have recognized the effects of their domestic programs on international trade and have agreed on "substantial progressive reduction" for all agricultural support that indirectly or directly affects import and export competition. Specifically, negotiators are focusing on reducing domestic and export subsidies, reducing market access barriers, harmonizing sanitary and phytosanitary barriers, and strengthening the role

of GATT in international agricultural trade.

The United States has been a strong advocate of eliminating government intervention in agriculture and could use the 1990 Farm Bill to send a message on its stance. The latest U.S. GATT proposal is to eliminate internal support and import barriers within ten years and export subsidies within five, while allowing decoupled payments and bona fide food aid. If the U.S. proposal was accepted, it would require changes in certain U.S. programs, and other U.S. programs would need to be removed. For example, the export enhancement program (EEP) would have to be abolished or changed to be consistent with GATT regulations. Over the ten-year period, subsidy programs tied directly to production would have to be totally eliminated. However, new decoupled programs could be instituted.

To send a message to the world agricultural community, the United States could write the 1990 Farm Bill to eliminate all agricultural support. While this scenario is highly unlikely, it represents a goal the United States wants all developed countries to pursue in the next ten years, as evidenced by its tabled proposal in the GATT negotiations. The different policy levels in the Farm Bill are illustrated with the use of an aggregate support measure, the producer subsidy equivalent (PSE). These subsidy equivalents show the level of direct income subsidy that would be required to replace a given set of government policies. Eliminating all agricultural support is equivalent to reducing the average U.S. PSE to 0 percent (Table 1).

Table 1 - Implied PSE's for 1990 Farm Bill Options
(in percent)

	GATT-High	Budget	GATT-Low
Beef and veal	10	5	0
Pork	7	2	0
Mutton and lamb	12	4	0
Poultry - meat	17	11	0
Poultry - eggs	8	4	0
Dairy - fresh milk	23	25	0
Dairy - butter	59	58	0
Dairy - cheese	41	40	0
Dairy - milk powder	40	43	0
Wheat	58	28	0
Corn	48	25	0
Other coarse grains	46	31	0
Rice	66	25	0
Soybeans	10	3	0
Soybean meal	0	0	0
Soybean oil	0	0	0
Other oilseeds	19	6	0
Other meals	0	0	0
Other oils	0	0	0
Cotton	40	18	0
Sugar	78	68	0
Tobacco	8	-20	0
Average	26	16	0

The effect of U.S. policies on net importing and net exporting LDC's is transmitted through the world price. The removal of U.S. producer subsidies and consumer taxes would decrease domestic production and increase domestic consumption, putting upward pressure on the world price. The increase in world price, in turn, would lower the quantity imported by LDC net importers. LDC food import bills could decrease or increase depending on import demand elasticities. For example, if a country has a relatively inelastic import demand, price increases would result in import volume decreases, and import bill increases. If total food import bills increase, foreign exchange needs will also increase, adding to the debt burdens of LDC's if they are able to borrow or reducing consumption in LDC's if they are unable to borrow.

The increased world price has a different effect on LDC net exporters. Export revenues increase from increased export volume because of the world price increases. This helps these countries to earn foreign exchange to service their debt, purchase imports, or make other investments.

A second force shaping the 1990 Farm Bill is the U.S. budget deficit. The U.S. Congress passed the Gramm-Rudman-Hollings Act (GRH) to gradually reduce the budget deficit and balance it by 1993. The Office of Management and Budget projects the federal deficit in 1991 will be \$41 billion above the GRH goal of \$64 billion. Many government programs are exempt from this act, meaning that programs such as agriculture that are not exempt

from GRH might have to be reduced more than proportionally so the overall budget deficit would be within the GRH targets.

In this study, the consequences of one budget option that the United States may take in the 1990 Farm Bill is simulated. If target prices continue to decline, the Congressional Budget Office (CBO) expects to spend \$9.3 billion on farm supports in fiscal year 1992, the first year of the 1990 Farm Bill. If the 1990 Farm Bill freezes target prices at 1990 levels, the CBO expects to spend \$11 billion. In line with previous budget reductions, a ceiling is put on agricultural outlays at \$10 billion for the Budget option by reducing proportionally the direct payment component of support of PSE's. This ceiling implies budget cuts from present levels and would most affect those commodities with large budget expenditures, like grains. Placing a \$10 billion ceiling on the agricultural budget is equivalent to reducing the average PSE from 26 percent to 16 percent (Table 1).

SIMULATION MODEL

The Static World Policy Simulation (SWOPSIM) modeling framework was used to test the effects of the alternative 1990 Farm Bill legislation options, \$10 billion budget ceiling and the unilateral liberalization of all agricultural policies (6). It is a static, nonspatial, partial equilibrium, and net trade framework. It has the capacity to make projections. In the version used, the world is divided into 36 linked country or regional models covering 22 of the more important temperate and

subtropical commodity groups. Demand and supply functions are specified for each commodity in each country and are functions of own and cross prices and projection shift parameters for supply (technical change) and demand (income and population growth). Agricultural policies are represented in the model by aggregate support measures of either producer and consumer subsidy/tax equivalents (CSE's and PSE's). A subsidy is positive support, and a tax is negative support. Trade is the difference between domestic supply and demand. The commodity supply and demand equations are parameterized to reproduce 1986/87 base period data for each country's supply, demand, prices, and trade (8). When an exogenous change occurs in the shifter term and/or policy levels, the model recalculates domestic supply and demand levels, rebalancing world trade, production, consumption, and prices in the process. The pattern of prices and quantities observed in the reference base can then be compared to the pattern which emerges from the model. Output from the exercises indicate what might happen if the United States pursued one of the 1990 Farm Bill options.

Using SWOPSIM's projection ability (shifter terms), a 1991/92 reference base was established by projecting from 1986/87 what world food markets would look like if 1986/87 policies and past income, population, and supply growth (technology change) patterns continued (1). Then a \$10 billion budget ceiling (average PSE = 16 percent) was placed on agricultural spending, holding other conditions constant. Lastly, all U.S. agricultural

support was removed for the unilateral liberalization scenario (average PSE = 0 percent), holding other conditions constant.

For both 1990 Farm Bill options, \$10 billion budget ceiling and the unilateral liberalization, we assume the price transmission elasticity for LDC's is one. A price transmission of one means that full world price changes are transmitted to the domestic markets of LDC economies.

CONSEQUENCES OF REFORM

Prices The results show that increased levels of liberalization by the United States puts upward pressure on world prices. The Budget options results show that the weighted average price (with weights determined by value of production across commodities and countries) would increase 1 percent relative to the reference run because of lower U.S. subsidies.

If the United States were to eliminate all agricultural support, the model shows that the weighted average world price would increase 4.1 percent relative to the reference run. U.S. subsidies are nonexistent in this option putting even more upward pressure on world prices relative to the budget option.

Balance of Trade The model results show that increased levels of liberalization of agricultural trade policy by the United States helps to improve the balance of trade for developing countries. LDC balance of trade improves by \$894 million in the budget option and \$2.8 billion in the unilateral liberalization option (Table 2). Much diversity exists when looking at individual trade balance picture. In general, developing country

TABLE 2
 PERFORMANCE OF AGRICULTURAL TRADE
 BALANCE IN 1991/92 UNDER FARM BILL SCENARIOS
 (IN MILLIONS OF U.S. DOLLARS)*

	1991/92 REFERENCE TRADE BALANCE	BUDGET	UNILATERAL LIBERALIZATION
=====			
LDC TOTAL	-15758	894	2765
=====			
NET EXPORTERS			

ARGENTINA	3969	181	526
PAKISTAN	376	95	201
BRAZIL	2559	82	375
OTHER SUBS. AFRICA	203	41	173
THAILAND	1408	29	152
INDONESIA	460	26	81
PHILIPPINES	650	12	39
CENT. AMER. & CARIBB.	696	3	217
MALAYSIA	2798	-3	-27
=====			
TOTAL	13119	466	1737
NET IMPORTERS			

ELASTIC IMPORT DEMAND:			
INDIA	-1129	261	975
MEXICO	-1100	135	359
OTHER LATIN AMERICA	-150	49	137
M. E./N. AFRICA-OTHER	-1534	23	66
BANGLADESH	-768	22	52
VENEZUELA	-479	14	61
OTHER ASIA	-1021	12	40
NIGERIA	-464	8	42
KENYA	-150	5	21
EGYPT	-2017	4	20
CHILE	-139	2	8
TOTAL	-8951	535	1781
INELASTIC IMPORT DEMAND:			
TAIWAN	-1812	-6	-46
OTHER EAST ASIA	-2324	-21	-48
M. E./N. AFRICA-OIL	-8014	-24	-387
SOUTH KOREA	-2440	-27	-87
REST-OF-WORLD	-5336	-32	-183
=====			
TOTAL	-19926	-110	-751

*See appendix for composition of regions.

net exporters experience trade balance improvements and net importers experience both improvements and deteriorations depending on the import demand elasticity.

Net exporters experience a \$466 million improvement in their trade balance when the U.S. imposes a \$10 billion budget ceiling (Table 2). When the world prices increase, export volume increases, thereby increasing trade revenue. Those countries that export grains experience large gains from the budget option. These crops account for almost 70% of the U.S. agricultural budget. For example, Argentina experiences the greatest improvement in the balance of trade, \$181 million relative to the reference base. Argentina experiences a gain of \$67 million in corn and wheat export revenue. Brazil increases its corn net exports by \$42 million.

Malaysia is the only exporter that experiences a balance of trade deterioration in the budget scenario. Though Malaysia is a net exporter, is at the same time a large importer of grains. An increase in import costs of corn and wheat lead to a deterioration in Malaysia's balance of trade.

When the U.S. removes all agricultural support in the unilateral liberalization scenario, LDC exporters experience larger gains than in the budget option. Argentina experiences the greatest gain of \$526 million in its balance of trade. This is largely due to increased export value of beef and grains. Brazil's ranking changes in this scenario relative to the budget scenario. Brazil is able to improve its net exports by \$375

million. This gain is largely due to increased exports of sugar. The United States removes all support including the large consumer tax on sugar and the world price increases; and Brazil increases its net exports of sugar by \$187 million. Again Malaysia's balance of trade deteriorates due to the same reasons given above.

Net importers experience both improvements and deterioration in their trade balances when the U.S. reduces agricultural support in the budget and unilateral liberalization scenarios. The improvements are experienced by those net importers that have relatively elastic import demands. When the world price increases, import volume decreases, thereby improving the balance of trade. The countries and regions included in this category are: India, Mexico, Other Latin America, Middle East/North Africa-other, Bangladesh, Venezuela, Other Asia, Nigeria, Kenya, Egypt, and Chile. India poses the greatest gain, \$261 million in the Budget scenario. In regards to the grains aspect of the budget scenario, Nigeria is a good example where its balance of trade improvement is largely due to an decrease of \$6 million in corn and wheat imports.

When the U.S. eliminates all agricultural support in the unilateral liberalization scenario, the net importers with relatively elastic import demands experience a gain of \$1.8 billion in their balance of trade. The world price increase provides even greater incentives for increased production and decreased consumption than in the budget option. Again, India

experiences the most gain, \$975 million, from a unilateral liberalization by the United States. Mexico poses the second largest gain. This is largely due to decreased import costs of grains and increased exports of beef and poultry.

Increased deterioration of the trade balance as the U.S. reduces support is experienced by those net importers with a relatively inelastic import demand. As the world price increases, import volume decreases, but the import bill goes up. This decreases the availability of foreign exchange. Pakistan experiences a gain of \$95 million in the budget option. A large part of this is from a \$48.6 and \$15.8 million increase in cotton and rice exports. South Korea suffers the greatest deterioration in the Budget Scenario which is primarily from increased import costs of corn, wheat, and cotton. Wheat contributes to over half of the deterioration in trade experienced by the Middle East/North Africa oil exporting region.

When the United States removes all agricultural support in the unilateral liberalization scenario, the net importers with relatively inelastic import demand experience a loss of \$751 million in their balance of trade. The Middle East/North Africa oil exporting region suffers the greatest loss of \$387 million. This is largely due to increased purchases of dairy powder. Dairy powder prices increase dramatically in this scenario when the PSE is reduced from 43% to zero. One advantage that these countries and regions have is active manufacturing and oil sectors to help pay for the increased food needs.

ECONOMIC IMPLICATIONS

First, producers benefit from higher world prices. They provide incentives for increased production.

Secondly, consumers face higher prices as the United States decreases agricultural support. The increase in world prices deters consumption. This raises concerns for countries having difficulty already feeding their people. These countries may require increased food aid in the short term until their economies could adjust to the U.S. policy changes.

Thirdly, the increases in prices encourages LDC production and deters consumption. On the whole, this means an improvement in the balance of trade. The respective increase in foreign exchange helps to relieve the debt burden of highly leveraged countries, pay for imports, and divert savings from paying for loans to other investment projects. This is especially relevant for those countries with relatively elastic import demands. Those countries with relatively inelastic import demands, have a comparative advantage in areas other than manufacturing.

In conclusion, the 1990 Farm Bill will affect world markets and thereby will affect developing countries. Projections of how world markets might look in 1991/92, show that increased agricultural liberalization by the United States increases world prices, and helps to improve LDC balance of trade.

APPENDIX

Table A1 - Country Composition of LDC Aggregate Regions

Central America & Caribbean: Belize, Costa Rica, El Salvador,

Honduras, Guatemala, Nicaragua, Panama, Bahamas, Bermuda, Cuba, Dominican Rep., Haiti, Jamaica, Trinidad & Tobago, Barbados, Bonaire, Curacao, French West Indies, Guadeloupe, Martinique, Turks & Caicos, Cayman Islands, Aruba, British West Indies, Leeward-Windward Islands, St. Kitt, Neth. Ant., Antigua, Nevis, Montserrat, British Virgin Islands, Grenada, St. Vincent, St. Lucia, Dominica, Guyana, French Guiana, Surinam

Other Latin America: Bolivia, Colombia, Ecuador, Paraguay, Peru, Uruguay

Other Subsaharan Africa: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Cent. Afr. Rep., Chad, Comoros Islands, Congo, Djibouti, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Reunion, Rwanda, Sao Tome/Principe, Seychelles, Sierra Leone, Somalia, Senegal, Sudan, Swaziland, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe Middle East and

North Africa - oil: Syria, Iraq, Iran, Kuwait, Qatar, Saudi Arabia, United Arab Emir., Oman, Bahrain, Algeria, Tunisia, Libya

Middle East and North Africa - other: Turkey, Cyprus, Lebanon, Israel, Gaza, West Bank, Jordan, North Yemen, South Yemen, Morocco

Other East Asia: Hong Kong, Singapore

Other Asia: Afghanistan, Bhutan, Brunei, Burma, Cambodia, Fiji, Laos, Mongolia, Nepal, North Korea, Sri Lanka, Vietnam

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