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*Agricultural Outlook for the Year 2000: Some Alternatives***

As we look ahead towards the close of the twentieth century, what can we expect of world agriculture? Will rising demands outgrow food production as predicted in 'The Global 2000 Report to the President' or will agricultural production increase at rates which are higher than the rates of growth in effective demand? Will market prices in real terms continue their downward trend or can we expect an upswing? How about farmers? Will they be better off or worse off? How will the current Uruguay Round of the General Agreement on Tariffs and Trade (GATT) influence agriculture in the future? The answer to these and other related questions will depend primarily on the success of policy reform efforts presently underway in many developed countries and the performance of the overall world economy. This paper attempts to provide alternative assessments of world agriculture in the year 2000 taking into account differing policy regimes and economic growth patterns.

We begin the paper with a brief description of the world agricultural net trade model that is used to project the outlook for agriculture in the year 2000. We then define and present summary support measures known as producer subsidy equivalents (PSEs) and consumer subsidy equivalents (CSEs) which are used as proxies in the model to measure all agricultural policies. The reference run which assumes the continuation of present policy regimes is described next. The report then provides a brief description of the likely market effects in the year 2000 of eliminating assistance to agriculture in developed countries. It also assesses the potential changes that would occur in the market if alternative assumptions concerning income and population growth were made. The paper concludes with an assessment of the importance of agricultural policies *vis-à-vis* other economic variables such as income and population growth as we enter into the twenty-first century.

THE MODEL: ASSUMPTIONS, FEATURES, AND DATA REQUIREMENTS

The analysis of the global outlook on agriculture in the year 2000 is done with the Static World Policy Simulation Modeling (SWOPSIM) framework (Roningen,

*Economic Research Service, US Department of Agriculture.

**The projections and views presented are those of the authors and do not represent official forecasts of the US Department of Agriculture.

1986). SWOPSIM is characterized by three basic features: 1) it is a nonspatial price equilibrium model; 2) it is a static model that can project world agricultural markets for a future year; and 3) it is a multi-commodity, multi-region partial equilibrium model. In order to use the model to describe world agricultural trade in the year 2000, we make the following assumptions: a) world agricultural markets are competitive – countries operate as if they had no market power; b) domestic and traded goods are perfect substitutes in consumption and importers do not distinguish commodities by source of origin; and c) a geographic ‘region’, possibly containing many countries, is one marketplace.

SWOPSIM is characterized by an economic structure that includes constant elasticity domestic supply and demand equations and summary policy measures (PSEs and CSEs). Supply quantities are functions of input and/or product prices. Demand quantities are functions of own and cross-product prices, and in cases of feed demands, of supply quantities of animal products as well. Trade is the difference between domestic supply and total demand (absorption). The policy structure is embedded in equations linking domestic and world prices. The standard policy structure is designed to allow flexibility in characterizing policies that might affect production, consumption, and trade. Policies are inserted as subsidy equivalents at the producer, consumer, export or import level. Price transmission elasticities are used to characterize the degree of connection of domestic and world prices. Details on the economic and policy structures inherent in the model can be found in Dixit and Roningén (1986), Roningén (1986), and Roningén and Dixit (forthcoming). SWOPSIM is able to simulate world agricultural markets in the future by including projections of standard parameters such as consumption per caput, income, population and supply growth. Projections of policy parameters are not explicitly made. For this paper, the model assumes either the continuation of policy regimes that exist in the base period or their total elimination. Supply and demand elasticities as well as real exchange rates are assumed fixed over the projection interval.

The version of SWOPSIM that we use for this study (ST86) is based on 1986/87 data. The world is divided into 11 regions – seven of which represent developed market economies, three that characterize developing countries, and one that describes the centrally planned economies (CPEs). Twenty-two agricultural commodities, mostly representing temperate zone products, are included in the model. The model does not include tropical products which account for a substantial proportion of the agricultural trade of developing countries. The model constructed for this exercise contains summary support measures for all regions except the CPEs. However, the interactions of the CPEs’ domestic sectors with the world market are constrained by a price transmission elasticity which limits the passage of world price signals to their region. The CPEs are assumed to have a price transmission of 0.2 implying a weak response to world price changes. A price transmission of 1 is assumed for all developed market economies. This implies that, over the long run, changes in world prices are completely transmitted to their domestic sectors. All other regions are assumed to have a price transmission of 0.5, indicating that only half of the changes in world prices would be transmitted to the domestic economies.

Several types of data were required for each country to construct ST86. Supply, demand and trade data were obtained from the Foreign Agricultural

Service, US Department of Agriculture (USDA), while exchange rate and world price information were acquired from the International Monetary Fund's (IMF) *International Financial Statistics*. The own and cross price elasticity estimates for demand and supply were based on a number of empirical studies. Details are presented in Gardiner, Liu, and Roningen (forthcoming). Information on the PSE and CSE data are given in USDA (1988). Population projection estimates were obtained from the US Bureau of Census, while trend growth rates in income per caput were based on World Bank data for 1960 to 1985. Supply growth rates were calculated as trends based on the Food and Agriculture Organization's (FAO) data for 1961 to 1985.

AGRICULTURAL SUPPORT PROFILES ACROSS COUNTRIES

One of our primary objectives in this paper is to examine the world agricultural market in the year 2000 with and without a movement towards freer trade. Also, as we indicated earlier, our reference run assumes that the 1986/87 policy regimes continue into the year 2000. Since our model uses PSEs and CSEs to proxy the 1986/87 policy regimes, we define the concepts and provide a cross-country profile of these aggregate measures of support.

A PSE is the level of subsidy that would be necessary to compensate producers (in terms of income) for the removal of government programmes affecting a particular commodity. The PSE for a particular commodity is positive when the net effect of all programmes affecting the commodity in a country is to increase the income of producers above what they would be in the absence of these programmes, and negative when the net effect of all programmes reduces incomes. A CSE is the level of subsidy that would be necessary to compensate consumers for the removal of government programmes. The CSE for a particular commodity is negative when the net effect of all programmes is to increase the price consumers pay for food and positive when consumers pay less for food than they would in the absence of the programmes. Details on terminology and methodology used in estimating the PSEs and CSEs can be found in USDA (1987). The same report also provides details on the limitations of the approach.

PSEs and CSEs provide a common basis for ranking agricultural protectionism. When examined across countries, they show the relative importance of government intervention in producer revenues and consumer costs. The aggregate agricultural PSEs and CSEs for 1986/87 indicate that Japan supports its producers the most, followed by other Western Europe, Canada, the European Economic Community (including Spain and Portugal) (EC), and the United States (Table 1). Australia and New Zealand have the lowest levels of overall producer support.

Assistance to producers can also be compared across commodities within countries. The share of assistance reflects both the size of the commodity sector in total production of commodities and the level of assistance. In Canada, Australia and New Zealand, the dairy industry receives the bulk of assistance, while in the US, cereal producers account for the largest share of government support. The share of producer assistance is distributed about evenly among cereals, dairy, and meat producers in the EC. Over two-thirds of the government

TABLE 1 *Producer and consumer subsidy equivalents by country and commodity groups, 1986/87.*

Commodity Group ¹	United States	Canada	EC-12	Other Western Europe	Japan	Australia	New Zealand
	<i>PSE per cent</i>						
Ruminant	11	11	40	50	72	6	13
Nonruminant meat	11	12	23	31	34	0	0
Dairy	25	74	26	53	97	30	8
Wheat	66	50	60	53	89	16	0
Coarse grains	55	46	47	49	103	3	0
Rice	72	0	74	0	104	8	0
Oilseeds and products	8	30	30	0	19	0	0
Sugar	94	58	48	66	45	15	0
Other products	34	15	49	0	0	2	0
Aggregate	28	41	34	47	75	13	9
	<i>CSE per cent</i>						
Ruminant	0	0	-11	-40	-42	-1	0
Nonruminant meat	-2	0	-9	-34	-20	0	0
Dairy	-22	-34	-20	-26	-48	-11	0
Wheat	-10	0	-50	-65	-33	0	0
Coarse grains	-2	-1	-47	-16	-29	0	0
Rice	0	0	-16	0	-86	0	0
Oilseeds and products	0	0	2	0	0	0	0
Sugar	-66	-13	-29	-48	-45	-35	0
Other products	-35	-18	0	0	0	-3	0
Aggregate	-7	-12	-13	-46	-43	-5	0

Note: ¹Ruminant meat (beef, mutton, lamb); nonruminant meat (pork, poultry meat, eggs); dairy (milk, butter, cheese, milk powder); coarse grains (corn, other coarse grains); oilseeds and products (soybeans, soymeal, soyoil, other oilseeds, other oilmeals, other oils); other products (cotton, tobacco). Averages are weighted by base production value.

Source: Compiled by Economic Research Service, US Department of Agriculture.

assistance in Japan goes to cereal producers, even though the sector accounts for only 40 per cent of the total value of agricultural production (Roningén and Dixit, forthcoming).

The costs of producer support have to be borne either directly by consumers through higher food prices or by tax payers through increased government budgets. The distribution of these costs vary considerably among countries. In the EC and Japan policies that tax consumers account for a large proportion of their support to agricultural commodities. Consequently, the CSEs are relatively high in those two regions. In the US, Canada, Australia and New Zealand, on the other hand, much less of the support is maintained through policies that tax consumers. Instead, they rely more on direct government budget support. The distortions in consumer prices – and hence the CSEs – are therefore much lower. Typically, distortions in trade would be greater with policies that tax consumers.

AGRICULTURE IN YEAR 2000 – REFERENCE RUN

To understand how world agriculture would look in the year 2000 under different scenarios, we proceeded in two stages. First, we established a reference run that projected what world food markets would look like if present policies and past growth patterns continued. As a form of model validation, we ensured that projections of certain economic variables such as patterns of real price changes and self-sufficiency were compatible with historical trends. Then, we eliminated all policies that distort trade, holding all other conditions constant, and compared the two scenarios.

Obtaining a base projection for the world market required information on income, population, and supply growth rates. We assumed an annual average gross domestic product (GDP) growth rate for developed countries of 2.5 per cent, ranging from 1.6 per cent for New Zealand to 3.1 per cent for Japan. GDP growth rates for developing countries are assumed to be higher than those for developed countries. The highest growth rates were assumed for newly industrialized importers such as Taiwan (China) and South Korea. Note, however, that the rate of growth in population in developing countries is much higher than in developed countries, and as a result, income growth per caput in developed countries is substantially greater than in developing countries. Details on the sources of these numbers can be found in Seeley, Magiera, Roningen, and Sullivan (forthcoming).

Our results suggest that real aggregate agricultural prices in the year 2000 would be about 4 per cent lower than in 1986/87 (base period), indicating that the annual decline in real prices over the next decade would be very small (Table 2). An interesting feature of the results is that ruminant meat and dairy product prices would rise slightly over the projections interval while those for other food products – primarily cereals and oilseeds – would fall. The increases in prices can be traced to the high income elasticity of demand for animal products and the rapid population and income growth in most developing countries. Projections by the International Institute for Applied System Analysis (IIASA) for the year 2000 also show similar price trends for animal products and cereals, though in their case, the price increases for animal products are considerably higher (Parikh, Fischer, Frohberg, and Gulbrandsen, 1988). Prices for non-food products – cotton and tobacco – would not change very much despite rapid expansions in demand in both the developing and the centrally planned economies.

Global agricultural production would grow at an annual rate of 2 per cent and would be nearly 30 per cent greater by the year 2000. These increases would be accompanied by some changes in global production patterns. Developing countries would expand their share of production of most agricultural commodities because of productivity increases. The centrally planned economies would account for a slightly smaller proportion of global production of cereals but a larger share of production of animals products.

Cereal consumption per caput in the year 2000 would be 6 per cent higher than at present in developed countries but would increase by only half that amount for developing countries because increases in consumption that would result from falling prices would be offset, to some extent, by their rapid population growth. Similar increases for less developed countries have also been projected by other

studies, including FAO's *Agriculture: Towards 2000*. Cereal consumption per caput would increase relatively more in centrally planned economies because of rising income per caput.

Self sufficiency in agricultural products for developing countries would be lower in the year 2000. Their projected growth in supply would be unable to keep pace with their expansion in demand. As a result, they would be forced to increase imports of agricultural products and this, in turn, would worsen their agricultural balance of trade considerably. Developed countries, on the other hand, would increase their self-sufficiency in most products, especially grains, and improve their balance of trade.

AGRICULTURE IN YEAR 2000: MOVEMENTS TOWARDS FREER TRADE

Will the global outlook in the year 2000 that we described in the reference run change considerably if developed market economies liberalize their agricultural policies and move towards freer trade? In a second experiment, we assumed that the US, Canada, EC, other Western Europe, Australia, New Zealand and Japan would eliminate all subsidies that distort agricultural trade – as proposed by the US for the Uruguay Round of GATT – and projected global agricultural outlook for the close of the century. All the other remaining countries, including the centrally planned economies, were assumed to maintain their present policies. The results for this and the latter scenarios are mostly expressed in relation to the outcome of the reference run described above.

Multilateral trade liberalization by developed market economies would reverse the declining trend in world agricultural prices. Aggregate agricultural prices in the year 2000 would be 18 per cent higher than in the reference run. The increases in world prices would be largest for dairy products, followed by sugar. The large increases in world prices for dairy products and sugar occur because levels of assistance to these commodities in developed market economies are, and have been projected to be, relatively high and developed country trade would continue to be an important component of world trade. World prices for cereals and ruminant meats would also be appreciably higher than that projected in the reference run for the same reasons. Multilateral liberalization would slow down the declining trends in oilseeds prices. However, oilseeds price changes would be small, indicating that agricultural policies pursued by developed countries would have only modest price depressing effects on oilseeds.

Self-sufficiency in agricultural products would rise for developing and centrally planned economies following multilateral liberalization by developed countries. As a result, developing countries would import less than they would have had present policies continued, and would save US \$9 billion in import costs relative to the reference run. Because developed countries would be exporting less and importing more, their aggregate agricultural balance of trade would deteriorate, although export earnings of the United States, Australia and New Zealand would increase.

Global agricultural production in the year 2000 would not be very different from that in the reference run, if developed countries multilaterally eliminated

TABLE 2 *Indicators of agricultural performance in the year 2000 under various scenarios¹*

	Base Period (1986/87)	Reference Scenario (2000)	<i>Scenarios for 2000</i>				
			Free Trade Developed Countries	High Economic Growth	Low Economic Growth	High Population Growth	Low Population Growth
<i>World Prices²</i>	<i>US \$/metric ton</i>					<i>per cent changes</i>	
Ruminant meats	2084	10.2	17.8	8.6	-8	2.7	-2.6
Nonruminant meats	1959	-5.9	11.5	10.7	-9.4	2.3	-2.2
Dairy products	2333	3.1	48.3	18.3	-15.7	3.8	-3.7
Wheat	115	-8.8	26.5	15.9	-13.8	5.6	-5.3
Coarse grains	85	-9.6	21.1	10.8	-9.8	4.5	-4.3
Rice	210	-7	18.3	27.4	-21.5	5.8	-5.5
Oilseeds & products	271	-9.8	6.2	14.2	-11.6	1.9	-1.9
Sugar	133	-5.3	31.3	15.8	-13.6	4.5	-4.3
Other crops	1714	-0.7	6.4	31.8	-23.5	2.9	-2.8
Aggregate	308	-3.8	17.5	14.6	-12.3	3.3	-3.2
<i>Self-sufficiency ratio</i>	<i>per cent</i>					<i>per cent changes</i>	
Developed countries	121	4	-8	6	-9	1	-1
Developing countries	99	-3	5	0	5	-1	1
Centrally planned economies	99	0	1	-3	1	0	1

<i>Aggregate supply growth</i>				<i>per cent changes</i>				
Developed countries	n.a.	16	-10	3	-4	1	1	
Developing countries	n.a.	43	2	4	-4	1	-1	
Centrally planned economies	n.a.	28	0	1	-1	0	0	
Global	n.a.	28	-1	3	-4	0	-1	
<i>Per caput grain use</i>				<i>per cent changes</i>				
Developed countries	kgs	608	6	0	2.2	-2.2	-0.7	0.7
Developing countries	209	3.1	-2.3	1.9	-1.6	-1.5	1.8	
Centrally planned economies	438	7.8	-0.4	2.3	-2.3	-0.8	0.8	
<i>Agricultural trade balance changes</i>				<i>billion US \$</i>				
Developed countries	n.a.	9.5	-11.8	23.3	-17.4	3	-2.8	
Developing countries	n.a.	-12.1	9.0	-6.1	5.4	-1.4	1.3	
Centrally planned economies	n.a.	2.6	2.9	-17.3	12.1	-1.6	1.5	
<i>Producer welfare changes</i>				<i>billion US \$</i>				
Developed countries	n.a.	18.6	-72.8	36.4	-29.4	9.3	-8.9	
Developing countries	n.a.	37.2	18.5	25.2	-20.1	4.2	-4.1	
Centrally planned economies	n.a.	36.5	10.0	13.3	-12	3.1	-3.1	
<i>Net welfare changes</i>				<i>billion US \$</i>				
Developed countries	n.a.	31.7	26.6	1.9	2.1	-0.1	0	
Developing countries	n.a.	44.8	0.3	4.1	2.2	-0.9	0.8	
Centrally planned economies	n.a.	47.9	0.6	0.4	0.5	-0.4	0.3	
Global	n.a.	124.4	27.4	6.4	4.8	-1.3	1.1	

Notes: ¹Changes are from base period for reference scenario, but from reference period for other scenarios.

²Weighted by global production at world prices.

all assistance to agriculture. However, there would be some shifts in production patterns with liberalization. Developed market economies would account for a lower share of global agricultural production, especially in rice, sugar and ruminant meats. While Japan would account for nearly the entire fall in developed country rice production, the US and the EC would account for the production shifts in sugar and ruminant meats, respectively.

Whether producers lose or gain from multilateral liberalization would be of considerable interest in the current round of international trade negotiations. Our results suggest that real incomes of producers in developed countries in the year 2000 would be lower by over US \$70 billion – equivalent to nearly twice the total US net farm income currently – if developed countries eliminated their assistance to producers. Most of these losses would be absorbed by grains producers in the US, rice producers in Japan, and beef producers in the EC. Producer incomes in developing countries would increase by an additional US \$19 billion because of increases in food prices.

Our results show that developed market economies would gain nearly US \$27 billion annually if they liberalized their agricultural markets by the year 2000. The US would be largest gainer, followed by the EC and Japan. Most of the gains to the US would come from government budget savings while those in the EC and Japan would result from consumer savings. Developing countries in the aggregate would experience very little real income gains from developed market economy liberalization. The gains that would occur would accrue largely to exporters like Argentina and Brazil. Yet since a majority of developing countries are net importers of food products, liberalization of policies that led to higher prices would result in net real income losses to many. Global income gains in the year 2000 from freer agricultural trade would be about US \$27 billion, indicating that most of the gains from liberalization accrue to countries that participate in liberalization. The gains would be even more if the present trend of increasing farm assistance were incorporated into the reference scenario.

We can draw a number of inferences from this exercise *vis-à-vis* continuation of current policies. A movement towards freer trade by developed countries would reverse the declining trend in grain prices and accelerate the growth in animal product prices. Farmers in developed countries would suffer real income losses because increases in prices would not be sufficient to compensate for the loss of government assistance. Developing countries would be more self sufficient in agricultural products and would improve their agricultural balance of trade substantially. Consequently, the outlook for agriculture in the developing countries in the year 2000 would be brighter if developed market economies liberalized their agricultural policies.

AGRICULTURE IN YEAR 2000: CHANGES IN ECONOMIC GROWTH

Agriculture depends on the performance of the overall economy. This dependence is especially high over the long run when changes in economic growth could influence demand for food products. The choice of income growth parameters in the reference run therefore could substantially affect the outlook for world

agriculture in the year 2000. To examine the effects that changes in overall economic growth could have on agriculture, we simulated two situations that parallel examples from the past. First, we assumed per annum income growth rates for all countries that would be higher than the historical trends used in the reference run. This would be similar to the situation in the early 1970s. Then, we assumed slower economic growth in all countries as occurred during the world recession in the early 1980s. In both cases, we assumed the continuation of present policies. To represent a faster growing world economy, we assumed annual rates of growth in incomes that were greater than historical trends by 1 percentage point for developing and centrally planned economies, and by 0.5 percentage point for developed countries. Our results suggest that accelerated economic growth would boost global demand for agricultural products in the year 2000 by an additional 3 per cent over the reference scenario. Because we assumed that developing countries would grow at a faster pace than developed countries, a slightly larger proportion of the additional demand, especially for animal products, comes from the Third World.

Given the expansion in demand, prices for agricultural products in the year 2000 would be 15 per cent higher than in the reference scenario. The largest price increases would be for non-food agriculture such as cotton and tobacco – commodities with high income elasticities of demand – and rice.

Developing countries would become more reliant on agricultural food imports with a faster growing economy. Consequently, their agricultural balance of trade would worsen considerably (US \$6 billion) compared to normal growth. By contrast, developed countries as an aggregate would increase their exportable surpluses and improve their balance of agricultural trade (US \$23 billion). Despite increases in imports, developing countries would experience real income gains of US \$4 billion in the year 2000. This is substantially more than the gains that would accrue if developed countries simultaneously liberalized their trade. Developed countries, on the other hand, would gain very little because of small projected increases in their economic growth. Moreover, not all developed countries would gain from enhanced growth. Net importers such as Japan and the EC would face larger import bills and higher food costs.

When we simulated a slow growing world economy in our second experiment (economic growth rates 1 percentage point less than trend), global agricultural demand fell by 4 per cent relative to the reference scenario. As a result, the decline in aggregate agricultural prices in the year 2000 was more than four times that in the reference run. Even prices for animal products trended downwards. Because developing countries would not be importing as much, their food import costs would fall and their agricultural balance of trade would improve slightly relative to normal growth. In addition, because of falling prices, they, as net importers, would experience some additional real income gains. These gains, however, are very small compared to consumer expenditures on food.

Our two experiments that examine alternative growth projections indicate that performance of the overall economy could substantially alter the picture of world agriculture in the year 2000. A one percentage point swing in growth would, for instance, make the difference between agricultural prices trending upwards or downwards over the projections period. Indeed, much of the current focus on eliminating assistance to agriculture in developed countries to achieve

better global balance in supply and demand through increased international prices could be achieved almost as effectively if the global economy were to grow slightly faster.

AGRICULTURE IN YEAR 2000: CHANGES IN POPULATION GROWTH

Total demand reflects both the effects of rising incomes and population growth. While the growth in income represents a desirable facet of economic development, rapid increases in population – especially in developing countries – is viewed with considerable concern because of the imbalances it could create between supply and demand.

To better understand the effects of population growth on world agriculture in the year 2000, we simulated two population growth scenarios. In the first – the high growth scenario – we projected an annual growth rate in population for developing countries that is 0.2 percentage point higher than that assumed in the reference run. In the second – the low growth scenario – we projected a population growth rate that is 0.2 percentage point lower than the trend.

Population growth rates in developed market and centrally planned economies were assumed to be higher/lower than trend by 0.1 percentage point under the two scenarios. Because considerable confidence exists concerning population growth projections, the deviations from growth assumed are relatively small compared to economic growth deviations used in the earlier scenario.

World agriculture would not look very different from the reference run in the year 2000 if population growth patterns were to change as assumed. World prices would be 3 per cent higher if population – and hence demand – were to grow faster, but 3 per cent lower with reduced growth. Recall that with liberalization or changed income growth patterns the price increases/decreases ranged from 12 to 18 per cent. The changes in other economic indicators would also be very small. Consumption per caput would remain virtually unchanged in all regions and the same would be true of self-sufficiency in agricultural products. There would be slight changes in the agricultural balance of trade for developing countries, but again, these changes would be small relative to the value of trade. Given the rapid population growth that has already been assumed for developing countries, marginal changes in those growth rates make very little difference to the global agricultural outlook in the year 2000. Trade liberalization and changes in economic growth influence world agriculture much more than slight changes in the assumed rate of population growth.

CONCLUSION

What inferences can we draw about agriculture in the year 2000 based on model results? The secular decline in real agricultural prices that we have observed over the last few decades will continue to the end of the century. This trend, however, could be reversed under two conditions: a breakthrough in GATT negotiations

that could lead to substantial policy reforms in developed countries or accelerated global economic growth as occurred in the early 1970s.

The picture for developing countries over the next decade is problematic. Rapid increases in population are likely to create expansions in demand that would outpace growth in supply, increasing developing countries' food import costs. Small changes in population growth trends are not likely to change the outlook substantially. These countries would, however, be better off if developed countries liberalized their agricultural policies.

We do not claim to know how agriculture will exactly look as we head into the twenty first century. Our results merely provide an outlook that could occur if our assumptions hold. Moreover, our model also does not include all agricultural products, especially tropical products which are important foreign exchange earners for developing countries. Notwithstanding these qualifications, it is clear that the world would be better off economically in the year 2000 if developed market economies liberalized their agricultural policies and if faster economic growth were to occur.

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