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# **AGRICULTURAL SUPPORT POLICIES AND PROGRAMS IN CENTRAL AMERICA AND DOMINICAN REPUBLIC IN LIGHT OF TRADE LIBERALIZATION**

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## PREFACE

The net benefits of trade liberalization and the distribution of those benefits among economic sectors and social groups are major concerns of policy makers in Central America and the Dominican Republic. The objective of the Bank's support to the Region is to assist in the design of policies that maximize total net benefits while improving the welfare of the poorer segments of society, the majority of whom reside in rural areas. The purpose of this study is to present an analysis of the current structure of agricultural support policies and programs in Central America and the Dominican Republic, based on the standard OECD methodology for measuring agricultural supports.

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## ACRONYMS AND ABBREVIATIONS

AMS	Aggregate Measure of Support
CA-5	Central American countries of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua
CAFTA	Central American Free Trade Agreement
CBI	Caribbean Basin Initiative
CSE	Consumer Support Estimate
DR	Dominican Republic
DR-CAFTA	Dominican Republic-Central American Free Trade Agreement
EU	European Union
GDP	Gross Domestic Product
GSSE	General Services Support Estimate
MPS	Market Price Support
MPS basket	Basket of commodities used to calculate Market Price Supports to the agricultural sector
OECD	Organization for Economic Co-operation and Development
PSE	Producer Support Estimate
PSE%	PSE as percentage of producer's revenues
R&D	Research and Development
TSE	Total Support Estimate
WTO	World Trade Organization

NOTE: All dollar amounts are in U.S. dollars unless otherwise indicated.

## EXECUTIVE SUMMARY

This analysis points to the need to rethink the structure of current agricultural support policies and programs in Central America and the Dominican Republic, given the heavy reliance on price supports and the steps to liberalize trade to be undertaken in accordance with the various trade agreements with the United States. The study undertakes the first systematic analysis of estimates of agricultural support policies and programs in Central America and the Dominican Republic, based on the standard OECD methodology for measuring agricultural supports. This analysis aims to enable policy makers to look forward in the implementation of transition policies and programs for the agricultural sector in light of trade liberalization.

The goal of the analysis goes beyond the short-term need of understanding and estimating current (pre-CAFTA) agricultural support structures of these countries. The principal message is that this analysis should be a key instrument and exercise to be undertaken by the Dominican Republic and Central American countries in a systematic manner, every two or three years, as OECD countries do. The actual support estimates are not necessarily the most important results for policy makers. Rather, being able to compare the supports that the various key agricultural products receive, as well as benchmarking the investment in public/collective goods (GSSE) with other

countries and with other investments of public resources, is at the core of the need to undertake this type of exercise.

The estimates show that market price supports (border protection) for imported agricultural commodities are providing most of the support to producers in Central America and the Dominican Republic. To maintain sector competitiveness with respect to OECD countries in a period of trade liberalization, Central American countries and the Dominican Republic will need to increase the importance of general services (public and collective goods) in the mix of supports to the agriculture sector. Although the Dominican Republic and Central America have, on average, higher total agricultural supports as a percentage of total GDP than OECD countries, total agricultural supports as percentage of agriculture GDP are much lower, reflecting the fact that the agricultural sector of the Dominican Republic and Central American countries has a larger weight in their overall economies than in the OECD countries. Finally, the results show that agricultural policies and programs in Central America and Dominican Republic are not necessarily being targeted to small producers of socio-politically sensitive crops. This reflects large in-country differences in agricultural supports per hectare for different products.

## I. INTRODUCTION

The Central American countries of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua (the CA-5), along with the Caribbean nation of the Dominican Republic (DR), have taken several important steps recently in the arena of international trade to restructure their economies to increase growth and reduce poverty. Among the most important is the Dominican Republic-Central American Free Trade Agreement (DR-CAFTA), which entered into effect as of October 2006 in all member countries except the Dominican Republic and Costa Rica. Panama is about to sign a similar agreement with the United States. These agreements will consolidate already established trade arrangements such as the Caribbean Basin Initiative (CBI) and expand opportunities in the single largest market in the world, the United States.

Much of the political debate in the CA-5 and the Dominican Republic has centered on the possible effects of trade liberalization on the rural economies of those countries. Some have expressed concerns that while trade liberalization will offer many opportunities to the Dominican Republic and Central America through guaranteed access to the U.S. market, not everyone will gain. In particular, concerns have centered on the effects of trade liberalization on the agricultural sector and, within this sector, the effects on producers of imported commodities. In that context, much of the debate has focused on the need for longer adjustment periods to help ease the transition. The rural economies in Central America and the Dominican Republic remain extremely important, as agricultural and linked industries represent a significant share of GDP, provide a significant share of total exports, and employ a large proportion of the economically active population (see appendix A for detailed statistics on rural poverty, employment, and agricultural trade). The fate of poor rural households, which typically produce staple crops for income and home consumption, are a particular concern to policy makers, as one of the expected effects of trade liberalization is that the domestic price of staples will fall.<sup>1</sup>

In order to provide agricultural policy and program recommendations to address these and other concerns, one needs to understand the current level and the structure of supports to the agricultural sector. This analysis intends to shed light on current (2000–04) (pre-CAFTA) agricultural policies and programs for the seven countries of Central America and the Dominican Republic by using the OECD methodology to estimate agricultural supports.

This analysis aims to enable policy makers to look forward in the implementation of transition policies and programs for the agricultural sector in light of trade liberalization. The main goal of such transition policies and programs should be to maximize the gains to household welfare while minimizing the losses, with particular emphasis on poor, small-scale farmers and taking into account the various tradeoffs in doing so. Policy has been used in five main ways to achieve these goals: preventing deterioration in the welfare of poor, small-scale staple producers by providing a combination of income support during the period of liberalization along with technical assistance in the

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<sup>1</sup> See Todd, Winters, and Arias (2004) for a discussion on the conceptual framework for public policy and program recommendations for the rural economy in light of CAFTA.

production of higher-value export crops and other activities; creating a stable and competitive macroeconomic environment; facilitating rural economic growth through investments in rural infrastructure (including roads, telecommunications, energy and irrigation); providing assistance in access to export markets, in particular to meet phytozoosanitary requirements; and providing improved management of the valuable natural resources, including water and marine resources.

The objective of this analysis is not to recommend specific policies and programs, but to provide the methodology, the estimates, and some key findings of the current support structure that will help policy makers redesign and/or improve the supports that currently are provided to the agriculture sector of Central America and DR. Further analytic work needs to continue to provide concrete alternatives to the current agricultural support structure, as well as to measure the efficiency of such supports.

## **II. METHODOLOGY FOR ESTIMATING AGRICULTURAL SUPPORT POLICIES AND PROGRAMS**

A qualitative and quantitative description of the agricultural support structure is an ideal starting point for better understanding current agricultural policies and programs in light of trade liberalization. To this end, this document provides an analysis of agricultural supports in the Dominican Republic and Central America, using the OECD methodology to estimate price and fiscal support to producers of agricultural commodities.<sup>2</sup> Such estimates are done and published every two years by OECD countries.

Initial analytical work, based on work by Timothy Josling (1973, 1975), building on early work by W. Max Corden (1971), defined the “subsidy equivalent” as “the monetary value that would be required to compensate farmers or consumers for the loss of income resulting from the removal of a given policy measure.” However, the OECD adopted indicators that measure the actual transfers from taxpayers and consumers to producers arising from policies. In order to make the names of the indicators reflect the underlining definitions as closely as possible and to make them consistent with one another, OECD countries agreed to replace “subsidy equivalent” by “support estimate” and use the following nomenclature: Producer Support Estimate (PSE), Consumer Support Estimate (CSE), General Services Support Estimate (GSSE), and Total Support Estimate (TSE). The current OECD methodology for measuring agricultural supports provides only a snapshot of the structure of agricultural policies and programs and does not take into consideration producer or consumer behavior at the margin.

Furthermore, the support estimates by the OECD methodology are intended to monitor and evaluate progress in agricultural policy reform. They differ from other measures that are intended as legal commitments to reducing specific supports, such as the Aggregate Measurement of Support (AMS) within the World Trade Organization (WTO) multilateral trade negotiations. The support estimates from the OECD methodology, in particular the Producer Support Estimate (PSE), measure all transfers to farmers from

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<sup>2</sup> For a detailed description of the methodology see <http://www.oecd.org/dataoecd/33/48/32361345.pdf>.



agricultural policies. By contrast, the AMS covers only domestic policies deemed to have the greatest production and trade effects (the so-called amber box in the WTO terminology).<sup>3</sup> It excludes trade policies that are not covered under the WTO market access and export subsidy disciplines, as well as blue and green box policies.

The definitions of each estimate used in this study are presented in appendix B and are based on the text provided by the OECD. Appendix C lists the various types of policies and programs that are considered in the calculations for each support estimate and the Total Support Estimate (TSE).

This methodology for calculating agricultural support estimates was applied for the seven countries of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and the Dominican Republic, all of which have signed or will sign free trade agreements with the United States. This study is in part a regional summary of the efforts undertaken at the level of each country. The work of estimating agricultural supports was done by various expert consultants financed by the Inter-American Development Bank. The agricultural support estimates for Costa Rica were done by Rigoberto Stewart (2004); those for the Dominican Republic by Norberto Quesada (2005); and for the rest of the countries by the consultant firm Arthur D. Little (2005–06), financed by the IDB Spanish Trust Fund. Most of the databases provide estimates from 2000 to 2004, offering the opportunity to analyze recent trends in supports.

To calculate the Producer Support Estimate (PSE) and the Total Support Estimate (TSE) for a given country, the only component that had to be calculated for each commodity is that part of Market Price Support (MPS) that is financed by consumers. This is because all the other PSE and TSE components are recorded, explicitly or implicitly, as budgetary expenditure. Input subsidies in the form of interest concessions and tax rebates are budget revenue forgone that must also be calculated, but an estimate often appears in the budget. MPS is calculated for a number of commodities (referred to as the MPS basket). The MPS average for these commodities is then applied to all commodities—that is, to the total value of production of the whole agricultural sector—according to their share in the value of production. This method, even when consistently applied across countries, may overestimate or underestimate the MPS for particular countries if some key agricultural commodities are not included.

The larger the share of production covered by the MPS basket calculation, the smaller the risk of error. Thus error can be reduced by increasing the commodities specifically covered by MPS calculations. The share of the MPS basket in the total value of agricultural production varies across countries. To reduce potential error, efforts have been made to have the MPS basket represent at least 60 percent of the total value of agricultural production for the past three years. Table 1 shows the MPS basket by country. Most commodities (maize, coffee, livestock, eggs, and milk) in the MPS basket are common across the MPS calculations for all seven countries.

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<sup>3</sup> For a detailed description of classification of agricultural policies under the WTO (green, amber, and blue), see [www.wto.org](http://www.wto.org).

**Table 1. Value Added of Market Price Support Basket of Commodities and their Weight in Agricultural GDP, 2003**  
(percent)

	HONDURAS	GUATEMALA	DOM. REP.	NICARAGUA	EL SALVADOR	COSTA RICA	PANAMA
MAIZE	6	4	1	11	3	0	2
BEANS	2	2	1	0	4	0	0
RICE	2	0	12	5	1	3	8
COFFEE	17	15	6	2	17	9	3
BANANAS	11	0	0	13	0	29	14
SUGAR CANE	6	9	5	7	8	5	0
BEEF MEAT	5	4	14	21	0	--	12
PORK MEAT	3	4	2	1	0	--	7
POULTRY	7	12	9	0	0	--	13
EGGS	2	9	5	3	5	2	5
MILK	5	7	11	4	11	10	5
OTHER	0	0	4	2	12	0	0
<b>TOTAL</b>	<b>66</b>	<b>64</b>	<b>69</b>	<b>69</b>	<b>61</b>	<b>59</b>	<b>69</b>

Source: FAOSTAT (Costa Rica); Quesada (2005); Stewart (2004); Arthur D. Little 2006.

-- Information on value of production was missing from the data on Costa Rica by Rigoberto Stewart.

### III. ESTIMATES OF RECENT AGRICULTURAL SUPPORTS, 2000–04

Detailed support estimates divided by subgroups are presented in Appendix D. Table 2 presents a snapshot for 2003 of the different supports for the seven countries, comparing them with Mexico, the United States, the European Union (EU), and the average OECD country. The year 2003 was chosen since some of the country analyses do not have 2004 estimates. Table 2 shows the great difference that exists in the levels of total support to the agriculture sector. The seven countries combined amount to a Total Support Estimate of \$2.15 billion, compared to \$94 billion for the United States, \$74 billion for Mexico, and \$350 billion for all OECD countries.

**Table 2. Agricultural Support Estimates for Central America-Dominican Republic and OECD countries, 2003**  
(\$ million)

Indicator	NI	CR	GU	HO	DR	ES	PN	TOTAL 7	MEX	USA	EU	OECD
Producer Support Estimate	73	198	781	96	235	438	35	1,856	64,370	38,878	108,251	257,285
<i>via prices</i>	71	195	740	64	99	428	33	1,631	38,590	14,695	61,552	160,469
<i>via fiscal resources</i>	2	2	41	32	136	11	2	225	25,780	24,183	46,699	96,816
General Services Support Estimate	16	28	80	11	11	2	25	174	6,458	29,618	9,675	61,979
Consumer Support Estimate	(95)	(234)	(792)	(71)	(3)	(497)	(136)	(1,828)	(46,472)	8,669	(55,450)	(153,793)
Total Support Estimate	89	282	907	107	263	441	61	2,149	71,185	94,076	121,890	349,808

Source: Databases from Arthur D. Little (2006), Stewart (2004) and Quesada (2005).

Note: Numbers in parenthesis mean “negative support.” These appear for the Consumer Support Estimates, showing that consumers are paying prices that are higher than international market prices for agricultural products.

It is important to note that all seven countries, with the exception of Dominican Republic, derive most of their support from Market Price Support. In other words, **border protection for imported agricultural commodities is providing most of the support to producers, a situation that will be changing because of the future increases in trade liberalization through trade agreements with the United States.** Nevertheless, not all agricultural products will be facing a reduction in border protection (tariffs) in the

short term. The trade agreements will grant the United States tariff-free access for all products, except potatoes and onions in Costa Rica, and white corn in the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua. Although, almost 59 percent of U.S. agricultural products will have immediate access, other agricultural tariffs will be removed over a period of 12 to 15 years. The most sensitive products will have tariffs eliminated over a period of 18 to 20 years. Sensitive products include beef, cigarettes, corn, dark chicken meat, frozen potatoes, pork, and some processed dairy (see appendix D for detailed tables on the tariff reductions for agricultural products in DR-CAFTA).

The Dominican Republic presents an unusual case for 2003 because the exchange rate depreciation in 2002–03 increased the prices of international commodities with respect to domestic prices, thus eliminating most price differentials. Nevertheless, the Dominican Republic gives its producers the highest fiscal supports of the countries in the Region studied: more than three times the level seen in Central America.

To better gauge the importance of the different types of agricultural supports and compare them across countries, this study developed specific ratios expressed in percentages, which are presented in Table 3.

The percentages in Table 3 show again that with the exception of the Dominican

**Table 3. Indicators of Agricultural Support Estimates for Central America-DR and OECD countries, 2003**  
(percent, except as indicated)

Indicator	NI	CR	GU	HO	DR	ES	PN	TOTAL 7	MEX	USA	EU	OECD
Fiscal Support / Market Price Support (MPS)	3	1	6	49	137	2	6	14	67	165	76	60
General Services Support Estimate (GSSE) / Total Support Estimate (TSE)	18	10	9	11	4	0.5	42	8	9	31	8	18
TSE / Total GDP	3.22	1.61	3.69	1.50	1.56	2.90	0.50	2.14	1.08	0.86	1.32	1.19
TSE / Agriculture GDP	13	20	16	13	14	35	7	17	316	78	70	79
Fiscal Support / GSSE	13	8	51	279	1,236	482	8	130	399	82	483	156
TSE / total hectares cultivated (US\$/ha)	46	1,255	630	100	240	667	110	309	2,870	542	1,372	—
Ag. GDP / Total GDP	19	9	23	14	11	9	8	13	4	1	2	2
Ag. GDP (2003, \$million)	691	1,383	5,646	824	1,859	1,264	930	12,596	22,513	121,300	173,497	441,700

Source: Author's calculations based on databases by Arthur D. Little (2006), Stewart (2004), and Quesada (2005). Agriculture GDP is Agriculture Value Added according to the World Development Indicators, 2006. -- not available.

Republic, fiscal supports represent a small fraction compared to Market Price Supports (MPS). This percentage of fiscal support to MPS is lower than the average for OECD countries, and even lower compared to the United States. Considering that MPS will be reduced through trade agreements to be signed with the United States, this ratio will increase for Central American countries and the Dominican Republic, but will probably not reach the levels seen in the United States.

The study also examined government support (investments) to the agriculture sector that are not allocated to specific commodities. The percentage of public/collective goods (represented by the General Services Support Estimate, or GSSE) versus total supports (GSSE/TSE) shows the importance of investments in such public/collective goods with

respect to total agricultural supports. The GSSE/TSE percentage is lower for DR-Central America countries than OECD countries, and in particular than the United States, with the clear exception of Panama. Since the Total Support Estimate includes the Market Price Support, the **low GSSE/TSE percentage reflects current high reliance from DR-Central America on Market Price Supports. It also points to the need for DR-Central America to increase the importance of general services or public/collective goods in the mix of supports to the agriculture sector, in order to maintain sector competitiveness with respect to OECD countries.**

The study zeroed in on the importance that the agriculture sector has in the overall economy by looking at the percentage of total supports versus GDP. Total agricultural supports in Central America and the Dominican Republic (with the exception of Panama) are higher in relation to the country's GDP than OECD countries, even Mexico. However, if only agricultural GDP is considered, the seven countries' total agricultural supports (TSE) are on average 17 percent of agricultural GDP: one quarter of the average of OECD countries. The highest percentage of Total Support Estimate to agricultural GDP (35 percent) of the seven countries is El Salvador's; yet it is still half the percentage in the United States. This is mainly because the agriculture sector of the seven countries represents 13 percent of their economies on average, while the agriculture sector of OECD countries represent 2 percent of their economies on average. **This difference in Ag.GDP/total GDP poses serious fiscal constraints in terms of the amount of support the different DR-Central American economies can provide to their agricultural sectors.**

To provide a common basis for comparison, the study also focused on total agricultural support (TSE) per hectare of arable land. The countries of the region—with the exception of the Dominican Republic, El Salvador, and particularly Costa Rica—have lower per hectare supports on average than the United States, Europe, and Mexico. Nicaragua and Honduras have the lowest per hectare total supports (\$40 and \$100, respectively) compared with over \$500 in the United States and over \$1,300 in the EU. Costa Rica has a substantially higher total support per hectare than the rest of its neighboring countries: higher than the U.S. level and almost at the level of the EU.

Given the budgetary (fiscal) constraints of the DR-Central American countries, it is important to look at how these fiscal resources are being spent and whether they are being allocated to support producers directly (private goods) or the sector in general (public/collective goods). To do such analysis, this study created a measure: the percentage of fiscal supports to general services (Fiscal Support/GSSE). The results are shown in table 3. Honduras, the Dominican Republic, and El Salvador, like the European countries, dedicate more fiscal resources to support producers directly than to finance public/collective goods (percentages above 100 percent). On the other hand, the United States and Panama have percentages that are lower than 100 percent, showing greater allocation of fiscal resources to public/collective goods (GSSE) in the agriculture sector.

To better understand the different investments in public/collective goods (GSSE), tables 4 and 5 compare the allocation of resources within general services of the seven countries with those of the OECD in levels (US\$) and percentages, respectively.

**Table 4. General Service Support Estimate (GSSE) for Central America-DR and OECD Countries by Component, 2003**  
(*\$million*)

Indicator	NI	CR	GU	HO	DR	ES	PN	TOTAL 7	OECD
<b>General Services Support Estimate (GSSE)</b>	1.07	27.48	12.00	11.26	10.77	1.78	25.20	89.56	60,752
Research and development	-	6.92	2.00	1.38	4.67	0.55	5.60	21.12	6,049
Agricultural schools	-	5.71	5.00	1.26	0.91	--	5.20	18.08	1,781
Inspection services	a	8.39	1.00	2.35	1.85	1.23	2.60	17.43	2,291
Infrastructure	0.57	6.22	4.00	5.62	0.71	--	5.70	22.83	19,943
Marketing and promotion	0.50	0.25	--	0.42	--	0.40	5.30	6.86	24,791
Public stockholding	--	-	--	0.22	--	--	--	0.22	2,223
Miscellaneous	a	a	a	--	2.63	--	0.80	3.43	3,673

Source: Databases from Arthur D. Little (2006), Stewart (2004) and Quesada (2005).

a. The GSSE miscellaneous estimates for CR, GU, and NI, and the inspection services estimate for NI, were adjusted from the original databases of Arthur D. Little and Rigoberto Stewart since the subsidy to interest rates, rural programs, and the IDR program for these three countries, respectively, were not allocated properly because of problems with desegregation.

**Table 5. General Services Support Estimate (GSSE) for Central America-DR and OECD Countries, by Component, 2003**  
(*percent*)

Indicator	NI	CR	GU	HO	DR	ES	PN	TOTAL 7	OECD
<b>General Services Support Estimate (GSSE)</b>	100	100	100	100	100	100	100	100	100
Research and development	0	25	17	12	43	31	22	24	10
Agricultural schools	0	21	42	11	8	0	21	20	3
Inspection services	0	31	8	21	17	69	10	19	4
Infrastructure	54	23	33	50	7	0	23	25	33
Marketing and promotion	46	1	0	4	0	22	21	8	41
Public stockholding	0	0	0	2	0	0	0	0	4
Miscellaneous	a	a	a	0	24 <sup>b</sup>	0	3	4	6

Source: Author's calculations based on databases by Arthur D. Little (2006), Stewart (2004), and Quesada (2005).

a. The GSSE miscellaneous estimates for CR, GU, and NI were adjusted from the original databases of Arthur D. Little and Rigoberto Stewart since the subsidy to interest rates, rural programs and the IDR program for these three countries, respectively, were not allocated properly due to problems with desegregation.

b. The miscellaneous category for the Dominican Republic includes: sectoral programming from the Secretary of Agriculture (SEA), meteorological services, IDECOOP, Plan Sierra, Rural Youth Foundation, Iberoamerican Advisory Committee for Rural Youth, and expenses for price controls of agri-foods.

Within the category of general services support, OECD countries invest relatively more in marketing and promotion, while DR-Central America invests relatively more in R&D, agriculture education, and inspection services. This may reflect the fact that OECD countries face fewer inspection (phytozoosanitary) restrictions in getting their products to market and have an already established R&D capacity relative to DR-Central America, and thus invest more in marketing and promotion. However, within DR-Central America, there are large differences in GSSE allocations. For example, El Salvador invests more than two-thirds of its resources on inspection services, while Honduras invests half in infrastructure. Nevertheless, El Salvador invests a total of \$2 million annually in GSSE, while Honduras invests \$11 million. Finally, an important issue to be analyzed further is whether it makes more sense for Central American countries to be investing in regional public/collective goods to reach economies of scale, thereby improving the efficiency of their GSSE allocations.

Turning to a more detailed examination of Producer Support Estimates (PSE), the study also examined PSE as percentage of producer's revenues (PSE%). Table 6 shows that total PSE% in 2003 for DR-Central America are lower than OECD countries and equivalent to those of the United States. Nevertheless, some countries, such as El Salvador and Nicaragua, have higher PSE% than the United States, while Panama has very little total producer support. **Eggs, pork, and maize are the only products that exhibit higher average PSE% for DR-Central America than the OECD. The highest levels of PSE% occur for: sugar in El Salvador, Nicaragua, and Guatemala; eggs in Costa Rica and Panama; and rice in Guatemala and Honduras.** However, products outside the standard OECD MPS basket are also considered, relatively high levels of PSE% occur for sorghum in El Salvador and the Dominican Republic (70 and 75 PSE%, respectively); and potatoes in Costa Rica (70% PSE).

**Table 6. PSE as a Percentage of Producer's Revenues (PSE%) for Central America-DR and OECD countries, by Product, 2003 (PSE%)**

Product	GU	HO	CR	NI	DR	ES	PN	AVG 7	MEX	USA	EU	OECD
Maize	31	10	30	7	52	33	26	27	36	15	41	21
Rice	65	68	45	17	22	35	17	39	26	34	36	74
Sugar	71	21	--	62	3	67	--	49	49	61	63	56
Milk	44	54	46	25	16	48	55	41	33	45	47	49
Eggs	29	2	63	-12	2	-1	60	20	2	3	2	5
Meat (beef)	10	3	12	25	2	1	1	8	9	3	77	35
Meat (pork)	32	32	49	8	1	25	13	23	7	4	24	21
Poultry	48	1	4	--	1	-1	4	9	19	4	37	17
<b>Average</b>	<b>14</b>	<b>14</b>	<b>36</b>	<b>26</b>	<b>17</b>	<b>37</b>	<b>6</b>	<b>19</b>	<b>19</b>	<b>18</b>	<b>35</b>	<b>32</b>

Source: Databases from Arthur D. Little (2006), Stewart (2004) and Quesada (2005).

-- not available

Given the differences in production structures of the DR-Central American countries, it is worth highlighting certain aspects that arise from the PSE calculations, looking forward to a period of increased trade liberalization for the region. In particular, the country by country discussion below highlights certain relationships between the PSE and the production structure of specific agricultural products for the year 2003 that reflect some of the country's agricultural policies and programs.

**Costa Rica:** Potatoes have the highest PSE%, while rice, pork, eggs, and milk receive the highest levels of support in terms of the level (US\$) of total transfers.

**El Salvador:** Sugar in El Salvador and Guatemala has the highest PSE% of any agricultural product in any DR-Central America country (67 and 71 percent respectively); yet there are over 2,000 producers with average landholdings of 5.3 has, representing only 3 percent of Ag.GDP. However, less than 1 percent of the support to sugar producers comes from fiscal resources. The PSE for rice is also relatively high (35 percent), with 12.8 percent of such support coming from fiscal resources, while there are only 2,000 producers. As a comparison, in 2003 PSE for sugar represented the equivalent of more than \$2,000/hectare, while PSE for maize represented less than \$100/hectare.



**Guatemala:** PSE% levels are lower than the average DR-Central America. Most of the PSE% derives from price supports. Maize receives a relatively large share of fiscal support. However, sugar receives the highest PSE% of all products in Guatemala and DR-Central America—and is destined exclusively for local consumption (the beverage industry). This means that consumers of soft drinks are subsidizing local farmers and the beverage industry by paying higher prices than in the international market.

**Honduras:** PSE% levels are also lower than average. However, contrary to most Central American countries, a large portion of the producer support (over 30 percent) comes from fiscal resources. Rice, milk, and pork receive the highest producer support; however most of the PSE% comes from fiscal support. It is important to point out the specific case of rice, since it benefits from 68 percent PSE. Yet it represents only 0.2 percent of the Ag.GDP, with fewer than 3,000 producers who own relatively large plots of land (2.7 has/producer). On the other hand, maize producers receive 31 percent PSE, representing over 5 percent of Ag.GDP, with over 260,000 producers with average landholdings of 1.5 has. This translates into per hectare producer support for rice of \$420/ha, and for maize of \$20/ha.

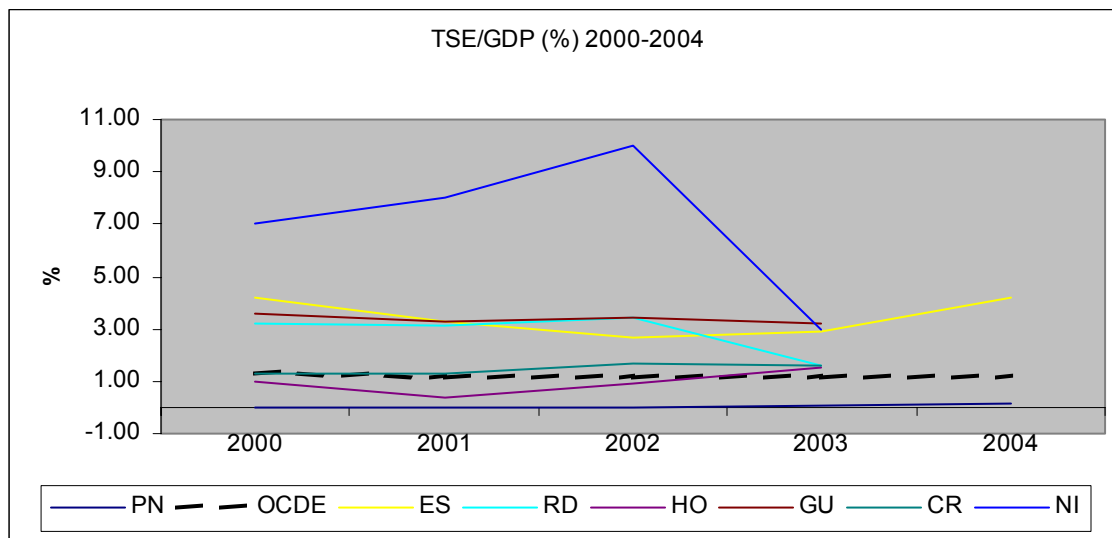
**Nicaragua:** Sugar has the highest PSE% and is the third most important agricultural product as a percentage of GDP after coffee and beans. However, production is solely for the domestic sugar industry, presenting a situation similar to the case of Guatemala.

**Panama:** The country has the lowest PSE% of the seven countries. Milk and eggs receive the highest PSE%. Overall, all producers receive less than 10 percent of the supports from fiscal resources. The differences in PSE for different crops are not as large as in other Central American countries like El Salvador or Honduras. For example, the PSE for maize is \$146/ha, while for rice it is \$300/ha.

**Dominican Republic:** Sorghum and maize are the most supported crops in terms of PSE%. The Producer Support Estimates for rice and sorghum were composed of Market Price Supports and fiscal supports in equal measure. This relatively greater outlay of fiscal support for these two products is the reason why they were the most protected during the 2003 period of a large devaluation of the currency and thus erosion of MPS.

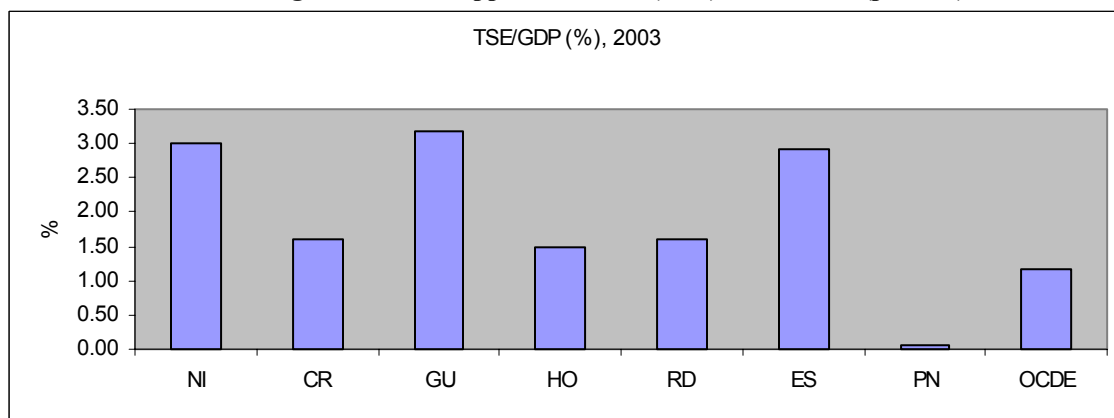
Finally, to get a perspective of the evolution of total supports in DR-Central America over the past few years with respect to the OECD countries, figure 1 plots the total support to GDP (TSE/GDP) ratio between 2000 and 2004. The only country below the OECD ratio is Panama, although it seems to be converging to the levels of the other countries in the region studied. Furthermore, even though the OECD ratio is declining, the ratios for Costa Rica, El Salvador, Guatemala, and Panama are increasing. However, a closer examination of the year 2003 reveals that in terms of scale, there is a substantial difference between the TSE/GDP of most DR-CAFTA countries—especially El Salvador, Guatemala, and Nicaragua—with respect to OECD countries.

**Figure 1. Total Support Estimate (TSE)/GDP, 2000–04 (percent)**



Source: Databases from Arthur D. Little (2006), Stewart (2004), and Quesada (2005).

**Figure 2. Total Support Estimate (TSE)/GDP, 2003 (percent)**



Source: Databases from Arthur D. Little (2006), Stewart (2004), and Quesada (2005).

#### **IV. FINDINGS ABOUT RECENT AGRICULTURAL SUPPORT POLICIES AND PROGRAMS AND CONCLUSIONS**

The first conclusion from the analysis is that DR-Central America, on average, has higher total agricultural supports as percentage of total GDP than OECD countries. However, total agricultural supports as percentage of agricultural GDP is much lower in DR-Central America than in OECD countries, reflecting the fact that the agricultural sector of the former countries have a larger weight in the overall economy than in the latter countries. Furthermore, Central America (with the exception of the Dominican Republic) relies more on price supports than fiscal supports than do OECD countries, and in particular than does the United States. This fact is key in terms of policy and program design for the transition of the region toward trade liberalization, where price supports will erode over the next 15 to 20 years.



There are no large differences between the resources allocated between general services (public/collective goods) and producer support (private goods) within the agricultural sectors of OECD countries and DR-Central America. For example, the Dominican Republic, and El Salvador seem to invest less than the average Central American country in general services as a percentage of total support, as well as the EU with respect to the average OECD country. Meanwhile, the United States and Nicaragua invest substantially more than the average OECD and Central American country respectively. However, while OECD countries invest relatively more in marketing and production, DR-Central America invests more in R&D, education, and inspection services. Thus investments in public/collective goods for the agricultural sector are not being allocated in the same fashion as in OECD countries. This difference in allocation of investments in public/collective goods reflects some of the different priorities between the two sets of countries, and therefore points to the challenges facing the DR-Central America countries looking toward trade liberalization with OECD countries.

Most of the producer supports, measured by Producer Support Estimates (in levels and percentages) seem to follow the productive structure of the agriculture sector relatively closely. Policies tend to target sensitive products with large number of small holders that account for a substantial portion of agricultural GDP. However, producer supports in Central America and Dominican Republic are not necessarily being targeted to small producers of sensitive products (maize, for example). Although an in-depth analysis of policies and programs for specific agricultural commodities goes beyond the scope of this document, it is important to note that the information provided by these estimates—when coupled with information on the productive structure of the agriculture sector—can indicate whether the policies and programs in place are targeting and reaching the key products that need support to transition to free trade.

OECD countries are reducing their total agricultural supports, switching from price supports to fiscal supports. DR-Central America will also be switching from price to fiscal supports, given the trade agreements signed (or being signed) with the United States. Such exogenous change in the structure of supports mandated by trade liberalization needs to be taken as an opportunity by policy makers to implement transition support policies and programs to maximize the benefits from further integration of the agricultural sectors of DR-Central America to international markets. Reviewing and measuring price supports and fiscal expenditures, especially in private goods (producer supports), should be key elements for policy makers in analyzing and addressing the needs and opportunities of the agriculture sector of the region in light of trade liberalization.

## **V. RECOMMENDATIONS FOR FUTURE ANALYSIS OF AGRICULTURAL SUPPORT POLICIES AND PROGRAMS**

The principal objective of this study is to undertake the first systematic analysis of agricultural support estimates of policies and programs in Central America and the Dominican Republic. The goal of the analysis goes beyond the short-term need of understanding and estimating current (pre-CAFTA) agricultural support structures of

these countries. The principal message is that this analysis should be a key instrument and exercise to be undertaken by the Dominican Republic and Central American countries in a systematic manner, every two or three years, as OECD countries do. Ministries of Agriculture and Finance should undertake the analysis on a regular basis.

The actual support estimates are not necessarily the most important results for policy makers. Rather, the focus should be on comparing the supports that the various key agricultural products receive, as well as benchmarking the investment in public/collective goods (GSSE) with other countries and with other investments of public resources.

Ministries of Agriculture should ensure that key staff have been trained in undertaking such analysis of support estimates. To ensure that the methodology for estimating supports retains its meaning and processes, regional discussions, systematic training, and cross-supervision among countries are recommended.

It is also key to improve upon the OECD methodology to adapt the estimates and key support indicators to domestic conditions, support programs, and special conditions of agricultural products in Central America and the Dominican Republic. For example, it would be important to estimate producer supports on a per hectare basis, as was done in this study, in order to have a common denominator when comparing levels of supports across producers, commodities, and geographical regions. It would also be very helpful for policy makers to estimate the impact of tariff reductions due to DR-CAFTA and other free trade agreements on the support estimates. Furthermore, since some of the current programs in DR-Central America provide support based on geographic region, estimating producer support per hectare by region would be ideal for informing the policy debate. Such additional analysis requires detailed information about the production structure of the country: information that was not available for all DR-Central America countries for the current study. Additionally, the public investments (GSSE) could be disaggregated further to gauge the optimal level of investments in R&D, phytozoosanitary controls, and other key services for each country.

It would also be ideal to measure the efficiency of agricultural supports (the percentage of the support devoted to administrative costs) to be able to evaluate each policy and program in terms of the final benefits to producers. Finally, with respect to the impacts of such supports on consumers of agricultural products in these countries, an important additional analysis would be to ascertain who are the consumers that are paying for the higher prices of these commodities. Low-income consumers have different consumption baskets than high-income consumers, and therefore will be affected differently by agricultural policies that focus on price supports for different commodities.

# Appendix A. Basic Statistics on Agriculture, the Rural Economy, Poverty, Trade, and Employment, Central America and the Dominican Republic

**Table A-1. Rural Population** (*percent of total population*)

	1998	1999	2000	2001	2002	1998–2002 average
Costa Rica	42	42	41	40	40	41
El Salvador	42	41	40	39	38	40
Guatemala	61	61	60	60	60	60
Honduras	49	48	47	46	45	47
Nicaragua	45	44	44	43	43	44
Panama	37	36	34	33	32	34
Dominican Republic	39	39	38	37	36	38

Source: World Bank, World Development Indicators.

**Table A-2. Rural and Urban Poverty** (percent headcount)

	Year/Change	Total	Urban	Rural	Rural-Urban
Costa Rica	1994	23.1	20.7	25.0	4.3
	2002	20.3	17.5	24.3	6.8
	change	-2.8	-3.2	-0.7	
El Salvador	1995	54.2	45.8	64.4	18.6
	2001	48.9	39.4	62.4	23.0
	change	-5.3	-6.4	-2.0	
Guatemala	1998	61.1	49.1	69.0	19.9
	2002	59.9	44.3	67.8	23.5
	change	-1.2	-4.8	-1.2	
Honduras	1994	77.9	74.5	80.4	5.9
	2002	77.3	66.7	86.1	19.4
	change	-0.6	-7.8	5.7	
Nicaragua	1993	73.6	66.3	82.7	16.4
	2001	69.3	63.8	76.9	13.1
	change	-4.3	-2.5	-5.8	
Panama	1997	--	--	--	--
	2002	34	25.3	48.5	23.2
	change	--	--	--	
Dominican Rep.	2000	46.9	42.3	55.2	12.9
	2002	44.9	41.9	50.7	8.8
	change	-2	-.04	-4.5	

Source: ECLAC (2003).

-- not available

**Table A-3. Importance of Agriculture, 1998–2002 a. Value added (percent of GDP)**

Country	1998	1999	2000	2001	2002	1998–2002 average
Costa Rica	12.8	10.5	9.5	8.6	8.5	10.0
El Salvador	12.1	10.5	9.8	9.4	8.7	10.1
Guatemala	23.4	23.1	22.8	22.6	22.5	22.9
Honduras	19.1	15.9	15.6	14	13.5	15.6
Nicaragua	32.4	31.6	18.6	17.7	18.0	23.6
Panama	7.4	7.0	7.2	7.7	7.5	7.4
Dominican Republic	11.5	11.4	11.1	11.3	11.5	11.4

Source: World Bank, WDI

**b. Ag. employment (percent of total)**

Country	1998	1999	2000	2001	2002	1998–2002 average
Costa Rica	20.1	19.7	20.4	15.6	15.9	18.3
El Salvador	25.1	22.1	20.7	21.8	n.a.	22.4
Guatemala	37.6	n.a.	36.4	n.a.	38.7	37.6
Honduras	34.6	35.1	n.a.	32.8	n.a.	34.2
Nicaragua	42.3	42.4	43.5	43.4	n.a.	42.9
Panama	17.8	17.4	17.0	18.1	17.4	17.5
Dominican Republic	17.1	17.5	15.9	14.9	15.9	16.3

Source: World Bank, World

Development Indicators.

n.a. *not applicable*

**c. Ag. exports (percent of total)**

Country	1998	1999	2000	2001	2002	1998–2002 average
Costa Rica	46.1	31.1	33.1	36.0	34.7	36.2
El Salvador	47.4	43	43.2	35.5	33.5	40.5
Guatemala	62.8	59.9	58.5	53.8	55.7	58.1
Honduras	72.7	63.1	68.4	68.9	49.7	64.6
Nicaragua	83.6	83.4	85.6	78.6	70.2	80.3
Panama	73	68	65	65	72	69
Dominican Republic	46	34	32	36	n/a	37

Source: COMTRADE.

## **Appendix B. Definitions of the Agricultural Support Estimates Used for this Study, Following the OECD Methodology**

The definitions of each estimate used for this study are provided in the list that follows. Definitions are based on the text provided by the OECD. The capital letters A–V below refer to the classification of policy measures included in the OECD Indicators of Support (see appendix C).

- a. **Producer Support Estimate (PSE):** An indicator of the annual monetary value of gross transfers from consumers and taxpayers to support agricultural producers, measured at farm gate level, arising from policy measures that support agriculture, regardless of their nature, objectives, or impacts on farm production or income. The PSE indicator can be reflected as a total monetary value (US\$) or as a percentage of the overall price paid to producers (PSE%). For example, if the PSE% is 40 percent, this means that without the supports, instead of earning \$1 the farmer would receive only \$0.60 for its product (at the farm gate). The PSE measures support arising from policies targeted at agriculture relative to a situation without such policies: that is, one in which producers are subject only to the country's general policies (including economic, social, environmental, and tax policies). Although the PSE is measured net of any producer contributions to help to finance a support policy (through a levy on production, for example), it is fundamentally a gross approximation because any costs associated with those policies that are incurred by individual producers are not deducted. It is also a measure of nominal assistance in the sense that increased costs associated with import duties on inputs are not deducted. The PSE includes both implicit and explicit payments, such as price gaps on outputs or inputs, tax exemptions, and budgetary payments, including those for remunerating nonmarketed goods and services. Therefore, PSE can be divided into a Market Price Support (item A below) and fiscal supports (items B through H below). Although farm receipts (revenue) are increased (or farm expenditure reduced) by the amount of support, the PSE is not in itself an estimate of the impact on farm production or income. The following paragraphs describe the main components of the PSE:
  - i. **Market Price Support (MPS):** An indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers arising from policy measures creating a gap between domestic market prices and border prices of a specific agricultural commodity, measured at the farm gate level.
  - ii. **Payments based on output:** An indicator of the annual monetary value of gross transfers from taxpayers to agricultural producers arising from policy measures based on current output of a specific agricultural commodity or a specific group of agricultural commodities.

- iii. *Payments based on area planted/animal numbers*: An indicator of the annual monetary value of gross transfers from taxpayers to agricultural producers arising from policy measures based on current plantings, or number of animals of a specific agricultural commodity or a specific group of agricultural commodities.
  - iv. *Payments based on historical entitlements*: An indicator of the annual monetary value of gross transfers from taxpayers to agricultural producers arising from policy measures based on historical support, area, animal numbers, or production of a specific agricultural commodity or a specific group of agricultural commodities, without obligation to continue planting or producing such commodities.
  - v. *Payments based on input use*: An indicator of the annual monetary value of gross transfers from taxpayers to agricultural producers arising from policy measures based on the use of a specific fixed or variable input or a specific group of inputs or factors of production.
  - vi. *Payments based on input constraints*: An indicator of the annual monetary value of gross transfers from taxpayers to agricultural producers arising from policy measures based on constraints on the use of a specific fixed or variable input or a specific group of inputs through constraining the choice of production techniques.
  - vii. *Payments based on overall farming income*: An indicator of the annual monetary value of transfers from taxpayers to agricultural producers arising from policy measures based on overall farming income (or revenue), without constraints or conditions to produce specific commodities, or to use specific fixed or variable inputs.
  - viii. *Miscellaneous payments*: An indicator of the annual monetary value of all transfers from taxpayers to agricultural producers that cannot be disaggregated and allocated to the other categories of transfers to producers.
- b. **General Services Support Estimate (GSSE)**: An indicator of the annual monetary value of gross transfers to general services provided to agriculture collectively, arising from policy measures that support agriculture, regardless of their nature, objectives, and impacts on farm production, income, or consumption of farm products. These payments for eligible private or public general service are provided to the agricultural sector collectively and not individually to farmers (they are also referred to as collective or public goods). They include payments for collective agri-environmental action and taxpayer transfers to: improve agricultural production (I. research and development); agricultural training and education (J. agricultural schools); control of quality and safety of food, agricultural inputs, and the environment (K. inspection services); improve off-farm collective infrastructures,

including downstream and upstream industry (L. infrastructure); assist marketing and promotion (M. marketing and promotion); meet the costs of depreciation and disposal of public storage of agricultural products (N. public stockholding); or fall into other general services that cannot be disaggregated and allocated to the above categories due, for example, to a lack of information (O. miscellaneous). Unlike the PSE and CSE transfers, these transfers are not received by producers or consumers individually, and do not affect farm receipts (revenue) or consumption expenditure by their amount, although they may affect production and consumption of agricultural commodities.

- c. **Consumer Support Estimate (CSE):** An indicator of the annual monetary value of gross transfers to (from) consumers of agricultural commodities, measured at the farm gate level, arising from policy measures that support agriculture, regardless of their nature, objectives, or impacts on consumption of farm products. The CSE includes explicit and implicit consumer transfers to producers of agricultural commodities, measured at the farm gate (first consumer) level and associated with: market price support on domestically produced consumption (P. transfers to producers from consumers); and transfers to the budget and/or importers on the share of consumption that is imported (Q. other transfers from consumers). and the CSE is net of any payment to consumers to compensate them for their contribution to market price support of a specific commodity (R. transfers to consumers from taxpayers); and the producer contribution (as consumers of domestically produced crops) to the market price support on crops used in animal feed (S. excess feed cost). When negative, transfers from consumers measure the implicit tax on consumption associated with policies to the agricultural sector. Although consumption expenditure is increased/reduced by the amount of the implicit tax/payments, this indicator is not in itself an estimate of the impacts on consumption expenditure.
- d. **Total Support Estimate (TSE):** An indicator of the annual monetary value of all gross transfers from taxpayers and consumers arising from policy measures that support agriculture, net of the associated budgetary receipts, regardless of their objectives and impacts on farm production and income, or consumption of farm products. The TSE is the sum of the explicit and implicit gross transfers from consumers of agricultural commodities to agricultural producers net of producer financial contributions (in MPS and CSE); the gross transfers from taxpayers to agricultural producers (in PSE); the gross transfers from taxpayers to general services provided to agriculture (GSSE); and the gross transfers from taxpayers to consumers of agricultural commodities (in CSE). As the transfers from consumers to producers are included in the MPS, the TSE is also the sum of the PSE, the GSSE, and the transfers from taxpayers to consumers (in CSE). The TSE measures the overall cost of agricultural support financed by consumers (T. transfers from consumers) and taxpayers (U. transfers from taxpayers) net of import receipts (V. budget revenues).

Therefore, the general criteria for classifying policy measures included in each of the indicators composing the TSE requires responses to the following sequence of questions:

- i. Does the policy measure create a transfer to (from) consumers of agricultural commodities? If yes, consider it under CSE and also proceed to the following question. If not, proceed to the following question.
- ii. Does the policy measure, including those creating a transfer to (from) consumers, create a transfer to producers individually based on goods and services produced, on inputs used or on being a farm(er)? If yes, consider it under PSE. If not, proceed to the following question.
- iii. Does the policy measure create a transfer to general services provided to agriculture collectively? If yes, consider it under GSSE. If not, do not consider it in the TSE calculation.



**Appendix C.**  
**Classification of Policy Measures Included in the OECD Indicators of Support**

**I. Producer Support Estimate (PSE) [Sum of A to H]**

- A. Market Price Support
  - 1. Based on unlimited output
  - 2. Based on limited output
  - 3. Price levies
  - 4. Excess feed cost
- B. Payments based on output
  - 1. Based on unlimited output
  - 2. Based on limited output
- C. Payments based on area planted/animal numbers
  - 1. Based on unlimited area or animal numbers
  - 2. Based on limited area or animal numbers
- D. Payments based on historical entitlements
  - 1. Based on historical plantings/animal numbers or production
  - 2. Based on historical support programs
- E. Payments based on input use
  - 1. Based on use of variable inputs
  - 2. Based on use of on-farm services
  - 3. Based on use of fixed inputs
- F. Payments based on input constraints
  - 1. Based on constraints on variable inputs
  - 2. Based on constraints on fixed inputs
  - 3. Based on constraints on a set of inputs
- G. Payments based on overall farming income
  - 1. Based on farm income level
  - 2. Based on established minimum income
- H. Miscellaneous payments
  - 1. National payments
  - 2. Sub-national payments

**II. General Services Support Estimate (GSSE) [Sum of I to O]**

- I. Research and development
- J. Agricultural schools
- K. Inspection services
- L. Infrastructure
- M. Marketing and promotion
- N. Public stockholding
- O. Miscellaneous

**III. Consumer Support Estimate (CSE) [Sum of P to S]**

- P. Transfers to producers from consumers
- Q. Other transfers from consumers
- R. Transfers to consumers from taxpayers
- S. Excess feed cost

**IV. Total Support Estimate (TSE) [I + II + R]**

- T. Transfers from consumers
- U. Transfers from taxpayers
- V. Budget revenues

## Appendix D. Tariff Structure for Agricultural Products in DR-CAFTA

**Table 1 United States. CAFTA Quotas in Year 1 for Exports from Central America and the Dominican Republic. May 28, 2004.**

Product	Base Tariff <sup>(a)</sup>	Elimination - of Quota		Quota Year 1 <sup>(b)</sup>	CR	ES	GU	HO	NI	RD	Growth Rate	Subsidy in USA <sup>(h)</sup>
		Basket	Years	tm	tm	tm	tm	tm	tm	tm		
Beef	26.4%	D	1-15	22,986	10,536	105	0	525	10,500	1,320	5% <sup>(c)</sup>	4%
Sugar	33.87 ¢/Kg	H	MFN <sup>(d)</sup>	107,000	11,000	24,000	32,000	8,000	22,000	10,000	2% <sup>(c)</sup>	58%
Peanuts	163.8%	E	7-15	10,500	0	500	0	0	10,000	0	5% <sup>(c)</sup>	22%
Peanut Butter	131.8%	D	7-15	280	0	0	0	0	280	0	10% <sup>(c)</sup>	22%
Cotton	31.4 ¢/Kg	D	1-15	0								
Tobacco	350%	D	1-15	0								
Cheese	1.509 ¢/Kg	F	11-20	2,638	300	450	500	350	625	413	5% <sup>(c)</sup>	48%
Fresh Cheese	1.092 ¢/Kg	F	11-20	250	0	0	0	0	250	0	5% <sup>(c)</sup>	48%
Evaporated Milk	31.3 ¢/Kg	F	11-20	220	0	0	0	0	0	220	10% <sup>(c)</sup>	48%
Milk Powder	86.5 ¢/Kg	F	11-20	50	50	0	0	0	0	0	5% <sup>(c)</sup>	48%
Butter	\$1.541 ¢/Kg	F	11-20	210	50	60	0	100	0	0	5% <sup>(c)</sup>	48%
Other Dairy Products	\$1.104¢/Kg+14.9%	F	11-20	730	150	120	250	0	100	110	5% <sup>(c)</sup>	48%
				-----	-----	Thousan ds	of	L i t e r s-----	-----	-----		
Ice Cream	50.2¢/Kg+17%	F	11-20	844.7	97.1	77.7	194.2	48.5	267.0	160.2	5% <sup>(c)</sup>	48%
Fluid Fresh and Sour Cream	77.2 ¢/Liter	F	11-20	1,894.7	407.5	366.7	305.6	560.3	254.6	0.0	5% <sup>(c)</sup>	48%
				-----	-----	M i l l i o n s	of	G a l l o n s-----	-----	-----		
Ethyl Alcohol <sup>(f)</sup>	1.9% y 2.5%	A	1	37.6	31.0	6.6	0.0	0.0	0.0	0.0	1.3 <sup>(g)</sup>	

Source: USTR (US Trade Representative). 2004a. "Chapter 3: National Treatment and Market Access for Goods," Annex 3.3 (Tariff Elimination) and Annex 3.15 (Agricultural Safeguard Measures: United States' list); "General Notes" (own tariff reduction categories and their Appendix I, USA quotas); and "US List from Annex 3.3" (similar to the USITC (US International Trade Commission). 2004. "Harmonized Tariff Schedule of the United States (2004)." Jan 1, 2004).

Notes: (a) The tariff is at zero, until the volume exported within quota WTO, and for other nonsubject products to quotas, under the preferences of the US as in the Generalized System of Preferences and the Caribbean Basin Initiative. (b) Duty free CAFTA products assigned to a country can have access to the global WTO quota, under "other" or country assignment i.e. sugar for all the countries and cheese for Costa Rica. The beef CAFTA quota is open only if the WTO beef quota is completed (USTR, 2004c, p. 2). Cotton and tobacco do not have CAFTA quota but can access WTO quotes, not assigned by country. For ice cream and fluid fresh and sour cream, the quota is in thousands of liters; for alcohol in millions of gallons. (c) Simple growth rate. (d) Most-Favored-Nations. After reaching 151,140 tm in year 15, the sum of the 6 quotas grew at 2,640 tm per year indefinitely. (e) Growth rate compounded. (f) Ethyl alcohol AG22071060 and AG22072000, amount in millions of gallons per year, subject to excise tax and additional taxes under code 9901.0050. (g) Costa Rica quota grows while El Salvador reaches 25.1 millions of gallons in year 15. (h) Subsidy, at producer's income or market price, as percentage of the producers' income in US for sale of this product in 2001-03 (OECD, 2004, pp. 132-134).

**Table 2. Central America and the Dominican Republic. CAFTA Quotas in Year 1 for Exports from the United States. May 28, 2004.**

Product <sup>(a)(b)</sup>	Total	CR	ES	GU	HO	NI	RD	Subsidy in USA <sup>(g)</sup>
	tm	tm	tm	tm	tm	tm	tm	
Prime and Choice Beef	1,100	0	0	0	0	0	1,100	4%
Beef, irregular boneless	220	0	0	0	0	0	220	4%
Top Prime and Choice Beef	1,165	0	105	1,060	0	0	0	4%
Pork	13,613	1,100	1,650	4,148	2,150	1,100	3,465	4%
Pork, irregular	220	0	0	0	0	0	220	4%
Bacon	220	0	0	0	0	0	220	4%
Lard 1501.0010	550	0	0	0	0	0	550	4%
Poultry:	28,295	330	464	21,810	534	317	4,840	4%
Meatless (mechanically)	440	0	0	0	0	0	440	4%
Quarters, fresh/frozen <sup>(c)</sup>	24,005	330	464	21,810	534	317	550	4%
Turkey	3,850	0	0	0	0	0	3,850	4%
Fluid Fresh	230	0	10	0	0	0	220	48%
Milk Powder	4,820	200	300	400	300	650	2,970	48%
Suero, Cuajada y Yogurt	10	0	10	0	0	0	0	48%
Yogurt	110	0	0	0	0	0	110	48%
Butter	820	150	100	100	100	150	220	48%
Cheeses	2,205	410	410	400	410	575	0	48%
Mozzarella Cheese	138	0	0	0	0	0	138	48%
Cheddar Cheese	138	0	0	0	0	0	138	48%
Cheese, other	138	0	0	0	0	0	138	48%
Ice Cream	768	150	120	160	100	73	165	48%
Other Dairy Products	632	140	120	182	140	50	0	48%
Rough Rice	352,320	51,000	62,220	54,600	91,800	92,700	0	46%
Milled Rice	2,140	0	0	0	0	0	2,140	46%
Parboiled Rice	3,000	0	3,000	0	0	0	0	46%
Processed Rice	52,510	5,250	5,625	10,500	8,925	13,650	8,560	46%
Beans	8,560	0	0	0	0	0	8,560	22%
High Fruct. Corn Syrup, 1702.3021	1,320	0	0	0	0	0	1,320	58%
Yellow Corn	1,151,259	0	367,500	525,000	190,509	68,250	0	21%
White Corn, MFN <sup>(d)</sup> (e)	84,660	0	35,700	20,400	23,460	5,100	0	21%
Sorgo	263	0	263	0	0	0	0	21%
Fresh Potato, MFN <sup>(f)</sup>	300	300	0	0	0	0	0	
Fresh Onion, MFN <sup>(f)</sup>	300	300	0	0	0	0	0	
Frozen Pre-fried Potato	2,631	2,631	0	0	0	0	0	

Source: COMEX (Ministry of Foreign Trade) 2004. "Chapter 3 National Treatment and Market Access for Goods," Annex 3.3 (Art. 13 tariff contingents); "General Notes" (Appendix I: quotes CR; ES; GU; HO; and NI); and "Tariff Elimination Program of Annex 3.3" CR; ES; GU; HO; and NI. USTR (US Trade Representative). 2004b. "DR TRQ Annex 1" and "DR Tariff Schedule."

Notes: (a) Duty free US CAFTA products can access OMC quotas of the countries. (b) A same product can have different tariff reduction baskets of over quota tariffs in different countries (Tables 11-16). (c) The quotas for ES, HO and NI begin in year 3. Quotas of GU decrease and hits 8,654 tm in year 12. ES, GU, HO and NI reserve the right to consult with the US about quotas in years 13-17; if an agreement is not reach, quotas will be 5% of the national production. (d) Most-Favored-Nations: quota grows forever after elimination period. (e) Sum of the four quotas reaches 84,660 tm in year 15; quotas grow at a simple rate of 2%. (f) Quota reaches 384 tm in year 15, and grows to 6 tm per year. (g) Subsidy, at producer's income or market price, as percentage of the producers' income in US for sale of this product in 2001-03 (OECD, 2004, pp. 132-134).

**Table 3 Categories or Baskets of Base Tariff Reductions, Annual Percentage**

Año	A	B	C	D	E	F	G <sup>1)</sup>	H <sup>2)</sup>	I	J <sup>3)</sup>	K <sup>4)</sup>	L <sup>5)</sup>	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
1	100	20	10	6.7			Libre	NMF	2	Libre	100	ZF	2	8.3			85.0							25	15	
2		20	10	6.7					2				2	8.3										25	25	15
3		20	10	6.7					8				8	8.3										25	25	15
4		20	10	6.7					8				8	8.3			1.0							25	25	15
5		20	10	6.7					8				8	8.3			1.0			8				25	15	
6			10	6.7					8				8	8.3			1.0		8	8					5	
7			10	6.7	8.25				16				16	8.3	8		1.0	11.1	8	8					5	
8			10	6.7	8.25				16				16	8.3	8		1.0	11.1	8	8					5	
9			10	6.7	8.25				16				16	8.3	8		1.4	11.1	8	8					5	
10			10	6.7	8.25				16				16	8.3	8		1.4	11.1	8	10					5	
11				6.7	13.4	10								8.3	8	8.25	1.4	11.1	12	10	13	8				
12				6.7	13.4	10								8.3	15	8.25	1.4	11.1	12	10	13	8				
13				6.7	13.4	10									15	8.25	1.4	11.1	12	10	13	8				
14				6.7	13.4	10									15	8.25	1.4	11.1	12	10	15	8				
15				6.7	13.4	10									15	16.75	1.4	11.1	12	10	15	8				
16						10										16.75					15	12				
17						10										16.75					15	12				
18						10										16.75						12				
19						10																12				
20						10																12				
Total	100	100	100	100	100	100	100		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Country <sup>(6)</sup>	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)																		
CR	x	x	x	x	x	x	x	x					(a)	(b)				(c)	(d)	(e)	(f)	(g)				
ES	x	x	x	x	x	x	x	x					(a)	(b)	(c)	(d)	(e)									
GU	x	x	x	x	x	x	x	x					(a)	(b)	(c)	(d)										
HO	x	x	x	x	x	x	x	x					(a)	(b)	(c)	(d)										
NI	x	x	x	x	x	x	x	x					(a)	(b)		(c)	(d)									
USA	x	x	x	x	x	x	x	x	(a)	(b)	(c)	(d)														
DR	x	x	x	x	x	x	x	x					(a)	(b)	(c)							(d)	(e)	(f)	(g)	

Source: Baskets A-H: COMEX (Ministry of Foreign Trade). "Chapter 3 National Treatment and Market Access for Goods," Annex 3.3 (common categories of tariff reduction), pp. 28-29. Baskets I-Y: "General Notes" on Tariffs for each country.

Notes: 1) tariff free products. 2) products in basket H continue with the MFN (*Most-Favored-Nations*) treatment. 3) tariff eliminated according to WTO list. 4) tariff eliminated in 1st year. 5) Applicable to FTZ (Free Trade Zones): the tariff charged to the value of processing outside the US will be the tariff applicable to the same product according to the basket until January 1, 2010, when it will be tariff free. 6) General Notes, No. 3.

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