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## Rising prices of agricultural products and their **impact** in Latin America and the Caribbean

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# Higher Food Prices and their Possible Impact on Agriculture in Latin America and the Caribbean<sup>1</sup>

Julio Paz Cafferata<sup>2</sup> and Henry Benavides<sup>3</sup>

## Summary

Over the last three years, agricultural prices have risen sharply. Increases in these prices have, however, been less dramatic than increases in the prices of fuels, metals and industrial inputs. The largest increases in the prices of agricultural products have been in the grains, oils and dairy products categories. The effects of international price increases on production, trade and consumption in each country depend on the degree to which these prices are passed on to the respective domestic markets. There are a host of factors that determine these effects: the extent of the dependence of domestic production or consumption on exports or imports, the level of competition and the existence of distortions on the domestic markets, the trade policies applied and fluctuations in the exchange rates of the national currency vis-à-vis the US dollar. The impact of high prices will therefore vary among countries and strata of the population. Insofar as the individual countries are concerned, net exporters of these products will benefit from rising prices, whereas net importers, whose food import bills increase, will be negatively affected. Family units, who are “net food producers”, will benefit from price increases that are passed on, whereas “net consumers”, even those involved in agriculture, will experience a negative impact.

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<sup>2</sup> Director of IICA Policy and Trade, [julio.paz@iica.int](mailto:julio.paz@iica.int)

<sup>3</sup> Specialist in the Directorate of Policies and Trade at IICA, [henry.benavides@iica.int](mailto:henry.benavides@iica.int).

**Key words:** price evolution, agricultural products, impact, agriculture, Latin America and the Caribbean.

## Introduction

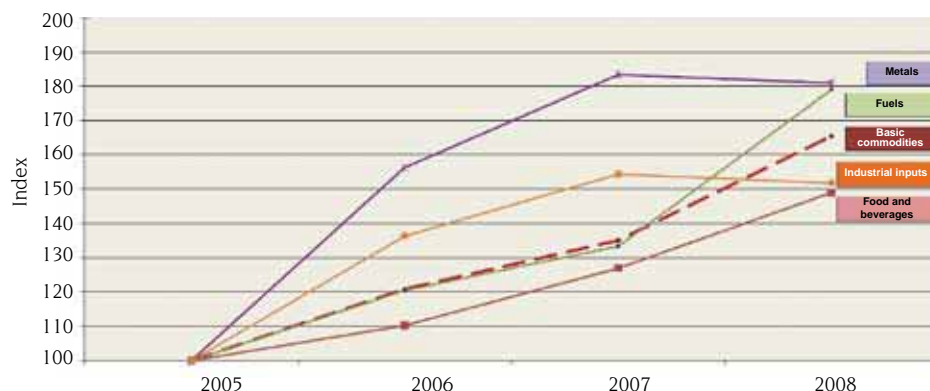
Over the last three years, the international prices of agricultural products have increased at a rapid rate, outpacing significantly the positive trend experienced since the beginning of the decade. International organizations involved in monitoring and making projections about price trends up to 2015 agree that agricultural prices will continue to be high, even though somewhat less so than at present, according to estimates by the World Bank, FAO/OECD and USDA. Everything would seem to suggest that the trend of low agricultural prices that has prevailed over the last 30 years has now been reversed. Projections by the Food and Agricultural Policy Research Institute of Iowa State University indicate that in the

medium term, prices of corn and vegetable oils will be 50% higher than average prices in the nineties; wheat and dairy products will be 40% higher; oilseeds and sugar will be 20% to 26% higher, and meat prices will be 12% to 14% higher (European Commission MAP 2007).

## Price Trends from 2005-2008<sup>4</sup>

During the period 2005-2008, the annual average growth rate in relation to **basic commodities** was 16.2%. This growth rate was mainly the result of the sharp increase in the prices of oil and minerals (18.5% and 19.4% annual growth, respectively). On the other hand, the **agricultural products** heading (food and beverages) grew at an annual 13.3%<sup>5</sup>.

**Graph 1. International Prices of Selected Basic Commodities, 2005-2008 (Index 2005=100)**



Source: IICA, with data from the IMF's World Economic Outlook (as of April 2008)

<sup>4</sup> Prices have been quoted from the International Monetary Fund's World Economic Outlook Database and, in the case of dairy products, from the FAO's International Commodities Prices.

<sup>5</sup> Basic commodities include fuels, industrial inputs, metals and food and beverages.



The accumulated price increase for **basic commodities**, as a whole, on the international market through April 2008 was approximately 65% in relation to their annual level in 2005. On the same date, the **agricultural products** heading showed average accumulated price increases of 49%, well below recorded increases in other basic headings such as metals (81%), fuels (79%) in relation to their 2005 average.

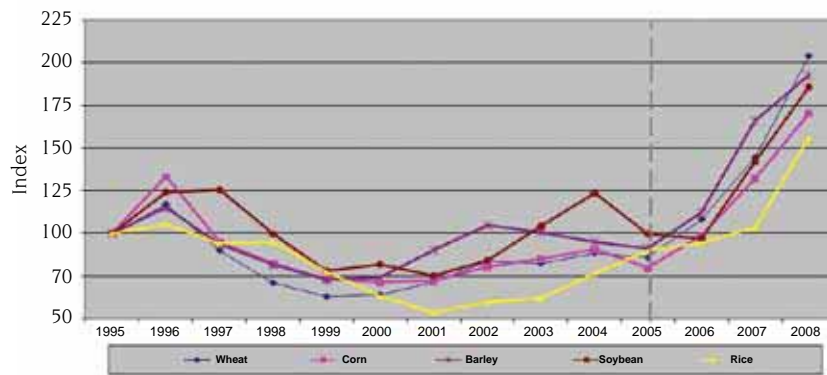
With respect to the basic agricultural commodities, prices of cereals have experienced the highest increase in the last three years, with an annual average 25.9% increase. Four factors explain the upturn in grain prices over the past year:

- a) The increased demand for biofuels;
- b) The increased demand from developing countries, especially China and India;
- c) Low grain inventories worldwide; and
- d) Diminished supply as a result of climate conditions that affected harvests in the main supplier countries (Australia, United States, European Union, Canada and Ukraine).

One additional factor that might be considered and that is cited by some specialists is the entry of speculative capital on commodity exchanges. The increase in financial investments in funds

that are indexed to basic commodity prices has been phenomenal since 2002. These investments have risen from US\$10-15 billion to US\$180 billion in 2006 (Taffel 2007)<sup>6</sup>.

**Graph 2. International Price Trends in relation to Grains and Soybeans (Price Indices)**



Source: IICA, with data from the IMF's World Economic Outlook (as of April 2008).

It is, however, the price of corn that has been most directly affected by the demand for biofuels. The reason is that corn has been the technological option exercised by the United States to produce ethanol. During the period 2005-2008, the price of corn increased an average 25.7% per annum, primarily as a result of the accelerated growth of demand. Whereas in 2000, the demand for corn to produce ethanol represented roughly 12% of domestic demand in the United States, that share has risen to 32% in 2008. What is more, it should be borne in mind that the United States accounts for 40 per cent of world corn production and 56 per cent of world food aid. Any program to stimulate

production therefore has a direct effect on the international market.

With an average 28.6% increase per annum, the price of wheat has also shown a sharp upward trend in this period, and has increased at a more accelerated pace over the last two years. According to FAO, the price of wheat increased because of a significant decline in production occasioned by climate conditions, mainly in Russia, Ukraine and the United States, and increased demand, which has resulted in unusually low stocks worldwide.

As of April this year, the price of rice on the international market, on the other

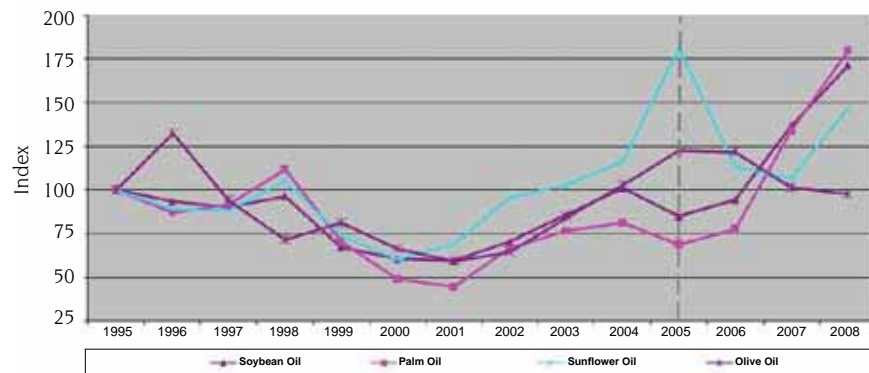
<sup>6</sup> Refers to basic commodity funds indexed to indicators such as the Commodity Research Bureau Index or the Goldman Sachs Commodity Index.



hand, increased, by more than 50% in relation to the average price in 2007, showing an annual average growth rate of 17.5% in the period 2005-2008. This sharp increase can be explained primarily by the decline in harvests of the major world producers in 2006/07, mainly the United States, which has replaced areas for corn production, and continuing growth in the demand for imports from Asian countries, especially, Indonesia.

The prices of vegetable oils went up an annual average 21.7% over the last three years, thereby fully recovering from the downturn during the five-year period 1997-2002. Two factors explain this substantial increase in prices: the significant rise in world demand for these products, both for direct consumption and for use in biodiesel production; and the increase in the prices of oil-bearing inputs, such as soybean. More significant price increases during the period 2005-2008 have been recorded for palm oil (34.4% per annum) and soybean oil (24.8% per annum).

**Graph 3. International Price Trends in Relation to Vegetable Oils (Price Indices)**



Source: IICA, with data from the IMF's World Economic Outlook (as of April 2008).

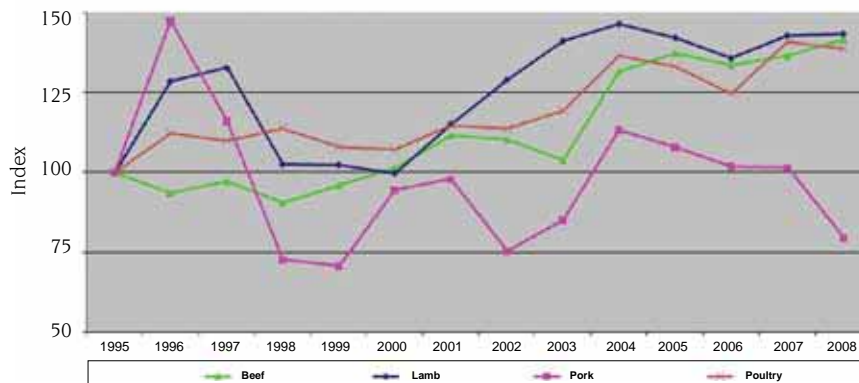


The prices of **tropical** products have also experienced significant annual increases during the three-year period 2005-2008: coffee (11%), sugar (3.1%), banana (4.9%) and oranges and orange byproducts (5.1%). The prices of cocoa bean increased sharply at an annual average 12.7%, after being severely depressed in the first four years of this decade (2000-2004). These products are relatively important in the export baskets of the Andean countries, as well as the Central American and Caribbean countries whose profits from the rising prices of grains, dairy products and other products is nil or very limited since

their production weighs more heavily in other regions.

With regard to **meat products**, prices have increased moderately during the 2005-2008 period and, in the case of pork, prices fell. Prices of beef and lamb increased at an annual average 1% approximately, chicken prices increased by 2.4%, whereas the price of pork dropped by more than 9% on average per annum.

**Graph 4. International Price Trends in relation to Meat Products (Price Indices)**



Source: IICA, with data from the IMF's World Economic Outlook (as of April 2008).

Since the beginning of this decade, worldwide production and consumption of and trade in livestock products have been affected by sanitary problems, mainly related to Bovine Spongiform Encephalopathy (BSE) in Europe and North America, the emergence of foot-

and-mouth disease in certain areas of South America, and Avian Flu in Southeast Asia. Towards mid-2004, the prices of beef and poultry reached their highest levels in the past nine years because of restricted supply resulting from sanitary problems<sup>7</sup>.

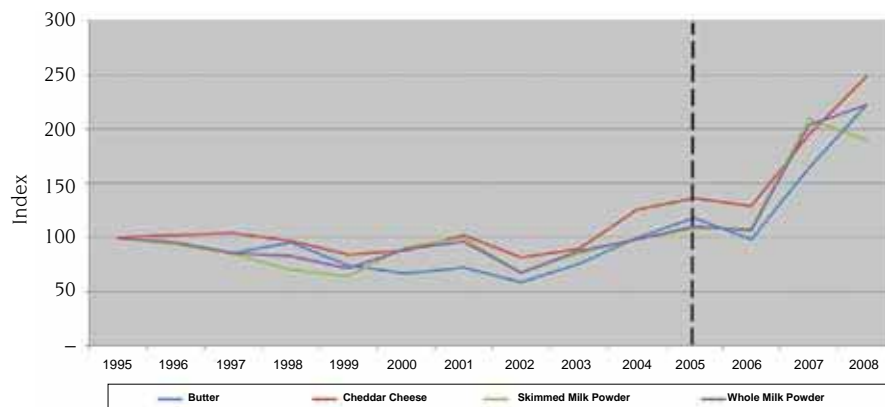
<sup>7</sup> Beef exports from the United States fell drastically in 2004 and have been recovering significantly over the last two years.



Pork prices, in turn, also hit record levels because of displaced demand due to the relative scarcity of other meats and consumer preference for more safety. During the period 2005-2008, with the slowing of outbreaks of diseases, the previously restricted beef markets have been gradually opening up and US production and export levels are recovering, as is confidence in the wholesomeness of these products. As a result, beef prices have stabilized in recent years, reversing in part the substitution of pork meat in previous years. The downturn in pork prices is also associated with the increase in the supply of pork meat and finished pigs in the United States.

**Dairy products** similarly experienced growth rates of over 22% during the period 2005-2008<sup>8</sup>. This increase is linked to a downturn in supply, as a result of climate change, which has affected large production areas, especially New Zealand and Australia, which are leading producers and exporters. Reduced subsidies applied by the European Union have also affected their dairy supply. On the other hand, demand has been stimulated by increased income in developing countries, chiefly India and China, and by the entry of new dairy byproducts (functional products), which have led to a steady increase in demand in developed countries.

**Graph 5. International Price Trends in relation to Dairy Products (Price Indices)**



Source: IICA, with data from FAO.

<sup>8</sup> Includes butter, cheddar cheese, skimmed milk powder and whole milk powder.

## International prices of agricultural products and their effects on domestic markets

In order to explain the possible effect of rising international prices on domestic markets, it would be useful to break down the analysis into two parts: first, an estimation of the degree to which changes in international prices are going to be reflected in the domestic prices of given products, whether at the wholesale level, or at the level of the producers or consumers, which is a problem of price transmission; and second, an examination of the distribution of benefits and losses resulting from increased prices among the various population groups.

### Price Transmission

The effects of international price increases on production, trade and consumption in each country depend on the degree to which these price increases are passed on to the respective domestic markets. Here, a number of factors come into play, including the following:

- The extent of the dependence of domestic production or consumption on the exports or imports of a given agricultural product. Even in the case of relative self-sufficiency, the transmission depends on the existence of the option to export/import in the face of the new international prices.
- The level of competition and the existence of distortions on the domestic markets (monopolies



in production, distribution or the processing of certain agricultural products).

- The trade policies applied, such as import or export tariffs and restrictions and price stabilization mechanisms.
- Fluctuations in the exchange rate of the national currency in relation to the US dollar, whether free-floating or managed, affect the extent of the price transmission to the domestic market.

Some of the above factors are unrelated to the decision of the intermediaries (wholesalers, importers or exporters) or producers. Others, however, are defined by them, depending on the degree of competition on the domestic market for a given product. One example can illustrate how these factors combine in the determination of the domestic wholesale price of an imported product like corn. The

price of the imported product is a significant reference in defining the price of the same product on the domestic market.

$$P_{Corn}^{Pesos} = P_{Corn}^{US\$} \cdot (1 + f_m) \cdot TC \cdot (1 + t_m + c) \cdot (1 + s_m)$$

The price of the imported corn in national currency on the domestic market ( $P_{Corn}^{Pesos}$ ) tends to be similar to the price of the corn on the international market in dollars ( $P_{Corn}^{US\$}$ ), to which the percentage of international freight ( $1 + f_m$ ) multiplied by the current rate of exchange, must be added to convert it to national currency. The percentage of import tariffs ( $t_m$ ) and other related customs charges and delivery costs (c) as well as the importer's marketing margin ( $s_m$ )<sup>9</sup> must be added to that amount.

The impact on the domestic price of the national corn as a result of the increase in the price of its imported equivalent also depends on any changes in other major factors during the same period. As may be seen in this scenario, the importer can only manage his marketing margin directly since the other variables are defined by the external market or by government policies.

If we take a quick look at how these other factors have evolved, we will be able to understand how they have affected domestic prices differently, depending on the importance of factors bearing on specific products or countries:

<sup>9</sup> The case for export products such as beef is as follows:

$$P_{Beef}^{Pesos} = P_{Beef}^{US\$} \cdot (1 - df_x) \cdot TC \cdot (1 - t_x - c) \cdot (1 - s_x)$$

In other words, the wholesale price of the meat on the domestic market in an export country will be similar to the price of the meat on the international market, multiplied by the exchange rate from which import duties, export costs, exporters' margins, the freight differential vis-à-vis the main world providers ( $df_x$ ) should be deducted.

- **International price in dollars** ( $P_{Corn}^{Pesos}$ ): the accumulated increase in the price of corn between 2005 and 2008 (up to April) is 113.4%.
- **International freight ratio** ( $f_m$ ): This component applies specifically to the product, route and ports. However, costs here have also increased significantly in the period 2005-2008 because of rising oil prices, increased demand for shipping services and the increased cost of passage through the Panama Canal. For example, in 2007, ocean freight for Chilean corn and soybean imports rose from US\$27 to US\$55/ton, an increase of 103% in one year (Association of Egg Producers, Chile, 2008). The cost of transporting one ton of cereals (corn, sorghum, wheat and soybean) from New Orleans to Buenaventura (Colombia) rose from \$22.25 in January 2006 to \$71.13 in November of 2007, i.e., an increase of 219.6% in almost two years (Nuestromar 2007).
- However, the Grain Freight Index from the International Grains Council shows an average increase of roughly 83% for freight costs for dry bulk cargo from May 2005 to April 2008 (International Grains Council, United Kingdom). In the case of countries and products where freight costs in the period under review

have risen more in percentage terms than the international price of the product, the freight ratio ( $f_m$ ) will be higher and will therefore contribute to a more substantial price transmission.

- **Exchange Rate (ER):** During the period 2005-2008, the value of the national currencies of several countries of the region rose in relation to the US dollar, notwithstanding the neutralization efforts of the respective central banks. The cause of this phenomenon is linked to the rising prices of basic commodities on the international market, which especially favor countries exporting oil, minerals and agricultural products in the region. Other causes are US trade and fiscal imbalances and the speculative flow of capital to certain Latin American and

Caribbean countries in search of better yields. In any event, this relative decline in the value of the dollar in these countries serves as a hedge against increases in international prices, much to the relief of import merchants, and to the detriment of national exporters holding expectations of profits. The currency that has appreciated most in value is the Brazilian *Real*, which now purchases 62% more dollars than in 2005. The national currencies of Colombia, Chile and Peru have, however, also appreciated significantly in value, which has had the effect of relieving the upward pressure on prices in their respective domestic markets.

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Table 1. Nominal Exchange Rates, 2005-2008			
Country	2005 (January) US\$/NC	2008 (April) US\$/NC	Increases in exchange rate in relation to the US\$
Argentina	0.34277	0.31560	-7.9%
Bolivia	0.12392	0.13459	8.6%
Brazil	0.37029	0.60077	62.2%
Colombia	0.00043	0.00056	31.6%
Chile	0.00174	0.00220	26.1%
Ecuador	1.00000	1.00000	0.0%
Peru	0.30675	0.36232	18.1%
Mexico	0.08890	0.09593	7.9%

Source: IMF and Central Banks.

- **Import Tariffs ( $t_m$ ):** In several countries of the region, tariffs have recently been used as an “anti-inflationary” instrument in the face of the spiraling international prices of basic food products. Some Andean countries (Colombia, Ecuador and Peru) have reduced to zero the import tariff applied to cereals (corn, wheat, sorghum), down from the 10% -15% levels that prevailed at the beginning of the period<sup>10</sup>.
- This reduction in the tariff ( $t_m$ ) also helps to cushion the impact of external prices on the domestic market. In the case of some countries exporting basic food products from the region, export taxes ( $t_x$ ) are being applied as a way of reducing the net income of the exporter per unit exported, partially to avoid the “contagiousness” of increases in export prices that have a negative effect on production intended for the domestic market and secure fiscal revenue on the major share of the additional income generated by increased export prices.
- In other cases, quantitative restrictions on exports are applied (quotas or prohibitions) to redirect national output to the domestic market and avoid price increases. In all of the previous cases, the purpose of the use of these trade policy instruments is to reduce the transmission of external prices.
- **Other customs clearance and transportation costs ( $c$ ):** These costs refer to fees for unloading merchandise, storage, administrative customs costs and internal transportation to the wholesale storage. Their impact on the price of cereal imports in several countries may be estimated at three to five per cent before the 2005-2008 period. Because several of these cost components are set in absolute terms (storage fees) and are linked to trends with regard to internal service costs, which have by and large increased moderately in the region, it is highly likely that their percentage increase ( $c$ ) in relation to higher prices for cereals may have gone down. This would be another factor that would attenuate the price transmission.
  - **Importer’s marketing margin ( $s_m$ ):** This factor is crucial in determining the degree of transmission and it bears specifically on each product in each country, since the extent of this margin depends on the degree of competition in each particular market. However, it also depends on variations in the operating costs of the broker/importer (financial and management opportunity costs, commercial risks, etc.). Maintaining the marketing margin in percentage terms would probably represent an extraordinary increase in the broker’s earning capacity, because brokers’ fees have barely

<sup>10</sup> Colombia and Ecuador are governed by the Andean Price Band System. See Circular no. 314 of the Andean Community, April 4, 2008.

been able to keep up with the rate of growth of imported cereal prices. One can therefore assume that the percentage value of the marketing margin ( $s_m$ ) may have gone down in many countries of the region.

It is therefore possible to estimate that the degree of transmission of the high international prices of basic agricultural commodities to the domestic markets in several Latin American countries has been attenuated, mainly as a result of direct government interventions (reduction in import tariffs, increase in export tariffs and restrictions) as well as the compensatory effect of movements in the foreign currency market.

Generally speaking, international agricultural prices have been only partially passed on to the domestic markets of the countries and this has occurred as a delayed reaction. Recent studies on experiences with agricultural price transmission show that in Chile the adjustment in milk producers' prices to international prices is slow in relation to other products such as wheat and corn, despite the fact that Chile has more liberalized trade and has several processing companies (Diaz *et al.* 2007). In Costa Rica, in the case of milk, the transmission is nearly nil because of the structure of the domestic market and the high tariff protectionism (Trejos *et al.* 2007).

Finally, price transmission in relation to basic agricultural commodities to the

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finished food products is less pronounced since the agricultural raw material is only one component in the cost structure and its relative weight is less than that of other constitutive variables, such as packing, advertising, transport, wages, *etc.*

In general terms, the transmission will be quicker if the product carries greater weight in the cost structure. For example, it is to be expected that the international price of corn is quickly and more forcefully transmitted in the poultry industry because corn or a substitute grain accounts for some 70 per cent of the total costs. In the high value added food industry, packing and advertising are variables that account for a high percentage of production costs and the transmission of international prices in relation to the raw material is not as forceful.

Notwithstanding, the consumer price index for food, which is already high in many Latin American countries, is having its most direct impact on low-income families.

► *Price transmission in relation to basic agricultural commodities to the finished food products is less pronounced since the agricultural raw material is only one component in the cost structure and its relative weight is less than that of other constitutive variables, such as packing, advertising, transport, wages, etc.*

Table 2. Variations in the food CPI							
Country	1995	2000	2003	2004	2005	2006	2007
Mexico	39.2	6.3	5.0	6.8	5.3	3.7	6.3
Costa Rica	20.5	9.7	9.4	13.7	16.4	11.9	13.9
El Salvador	6.7	0.1	1.6	6.2	6.0	3.1	6.2
Guatemala	8.8	4.3	5.8	10.3	13.2	7.1	9.9
Honduras	28.3	8.7	3.6	6.8	10.0	4.2	9.6
Nicaragua	12.0	5.0	3.7	10.1	11.4	9.7	15.7
Panama	0.6	0.7	1.2	0.8	4.3	1.3	6.7
Bahamas	2.0	1.6	0.5	2.9	3.1	4.7	-
Barbados	2.9	2.3	2.8	4.5	-	-	-
Haiti	24.2	9.7	36.7	35.5	16.6	14.2	8.5
Jamaica	20.3	2.0	9.6	13.5	18.3	6.5	7.7
Dominican Rep.	14.5	0.5	26.6	69.2	-1.6	4.1	6.6
Saint Lucia	7.7	-	-	-	-	-	-
Suriname	231.7	-	-	-	-	-	-
Trinidad and Tobago	15.2	8.3	13.8	12.8	22.9	23.2	17.4
Bolivia	12.0	1.6	3.5	6.0	5.8	5.6	13.7
Colombia	19.2	8.3	7.8	6.2	6.1	5.5	8.2
Ecuador	19.9	120.8	2.4	1.2	2.8	5.6	3.4
Peru	9.3	0.7	0.8	5.6	0.9	2.4	2.5
Venezuela	59.9	11.5	37.7	33.8	21.1	20.1	26.8
Argentina	2.8	-2.6	19.1	5.0	11.0	12.1	11.2
Brazil	55.6	5.1	20.4	4.0	3.1	0.0	6.3
Chile	8.3	1.4	2.8	-1.4	3.0	3.0	8.9
Paraguay	14.3	8.4	21.8	7.5	5.5	15.5	16.8
Uruguay	41.5	5.7	21.6	11.7	4.1	6.2	15.1

Source: CEPAL 2007.

## Distribution of benefits and losses

► *Insofar as the individual countries are concerned, these increases would tend to benefit those countries that are net exporters of these products and negatively affect net importers whose food import bills have increased.*

### a. The countries

The impact of high prices will vary from country to country and among different strata of the population. Insofar as the individual countries are concerned, these increases would tend to benefit those countries that are net exporters of these products and negatively affect net importers whose food import bills have increased. However, due to the fact that agricultural prices have increased within a context of an overall increase in basic commodities and that the prices of other products such as oil and minerals have increased more than those of agricultural products, the need arises to analyze the global situation with regard to the balance of trade in goods to identify the possible critical situations that could arise in the countries of the region in terms of access to the world food market. Firstly, if we consider solely the three groups of products that have experienced more significant

**Table 3. Situation with regard to food dependency, with average figures from 2001-2003**

Country	Net Imp./Exp.*		
	Grains	Oils	Dairy products
Argentina	X	X	X
Bahamas	M	M	M
Barbados	M	M	M
Belize	M	M	M
Bolivia	M	X	M
Brazil	M	X	M
Canada	X	X	X
Chile	M	M	X
Colombia	M	M	X
Costa Rica	M	X	X
Dominican Republic	M	M	M
Ecuador	M	X	M
El Salvador	M	M	M
Guatemala	M	M	M
Guyana	X	M	M
Haiti	M	M	M
Honduras	M	X	M
Jamaica	M	M	M
Mexico	M	M	M
Nicaragua	M	M	X
Panama	M	M	M
Paraguay	X	X	M
Peru	M	M	M
Suriname	M	M	M
Trinidad and Tobago	M	M	M
United States	X	X	M
Uruguay	X	M	X
Venezuela	M	M	M

\* X= net exporter, M=net importer

Source: Author, based on information from the FAO Statistical Yearbook, Country Profiles.



price increases over the last three years (grains, oils and dairy products) one can observe that in the American hemisphere, only two countries -Argentina and Canada- are net exporters of all these products, and four countries -Costa Rica, Paraguay, United States and Uruguay- are net exporters of two of these agricultural headings. The remaining countries of the hemisphere are net importers of all, or at least, two of these critical headings for food.

Among the net import countries that do not have problems financing food imports are the oil- or mineral-export countries whose trade balance surpluses have increased sharply in the period 2005-2006 in relation to 2003-2004: Bolivia (253%), Chile (148%), Ecuador (594%), Peru (269%), Venezuela (64%) and Brazil (56%). The situation is very different in most of the countries of Central America and the Caribbean where the balance of trade deficit increased significantly in recent years.

Table 4: Balance of Trade – Total Goods							
US\$ 1, 000, 000 current							
Country	2003	2004	2005	2006	2007	Balance*	2006-07/ 2003-04
United States	(578,279)	(707,160)	(828,417)	(881,442)	(853,795)	D	35%
Mexico	(13,107)	(17,539)	(17,930)	(17,728)	(24,534)	D	38%
Canada	27,718	36,617	38,138	30,445	28,823	S	-8%
Belize	(347)	(307)	(385)	(386)	(425)	D	24%
Costa Rica	(1,561)	(1,967)	(2,786)	(3,347)	(3,588)	D	97%
El Salvador	(2,626)	(3,024)	(3,448)	(3,964)	(4,697)	D	53%
Guatemala	(3,668)	(4,438)	(5,118)	(5,902)	(6,652)	D	55%
Honduras	(1,955)	(2,379)	(2,934)	(3,488)	(4,600)	D	87%
Nicaragua	(1,275)	(1,457)	(1,737)	(1,941)	(2,300)	D	55%
Panama	(2,222)	(2,651)	(3,162)	(3,751)	(5,810)	D	96%
Bahamas	(1,337)	(1,428)	(1,810)	(1,932)	(1,920)	D	39%
Barbados	(945)	(1,135)	(1,245)	(1,188)	(1,267)	D	18%
Bermuda	(781)	(915)	(936)	(1,069)	(1,127)	D	29%
Dominica	(88)	(102)	(122)	(125)	(150)	D	45%
Dominican Republic	(2,156)	(1,952)	(3,724)	(4,750)	(6,400)	D	171%
Grenada	(213)	(202)	(291)	(265)	(335)	D	45%
Guyana	(63)	(58)	(237)	(284)	(380)	D	447%
Haiti	(841)	(915)	(984)	(1,105)	(1,000)	D	20%
Jamaica	(2,459)	(2,538)	(3,208)	(3,667)	(3,995)	D	53%
Montserrat	(27)	(24)	(28)	(29)	(28)	D	11%
Saint Kitts and Nevis	(157)	(140)	(176)	(210)	(235)	D	50%
Saint Lucia	(341)	(344)	(415)	(522)	(558)	D	58%
St. Vincent and the Grenadines	(163)	(189)	(201)	(233)	(260)	D	40%

Table 4. (Cont.).							
Country	2003	2004	2005	2006	2007	Balance*	2006-07/ 2003-04
Trinidad and Tobago	1,286	1,516	3,887	7,666	7,243	S	432%
Bolivia	(18)	302	457	1,049	1,039	S	D → S
Colombia	(809)	(522)	(59)	(1,658)	(3,537)	D	290%
Ecuador	(480)	(473)	(187)	615	185	S	D → S
Peru	677	2,708	4,866	8,488	7,771	S	380%
Venezuela	17,974	22,989	31,689	31,594	20,574	S	27%
Argentina	15,732	12,131	11,662	12,411	11,153	S	-15%
Brazil	22,225	30,244	40,901	41,954	34,068	S	45%
Chile	2,342	7,727	8,562	19,707	22,188	S	316%
Paraguay	(986)	(1,470)	(2,027)	(3,973)	(3,906)	D	221%
Uruguay	16	(183)	(474)	(804)	(1,000)	D	S → D

Source: WTO Statistical Database.

For these cases of balance of payments problems brought on by sudden changes in international conditions, there are special funds created by the IMF, such as the Exogenous Shock Facility (ESF), designed to address critical situations affecting low-income countries, and the Compensatory Financial Facility (CFF), created in 1963 to address financial needs of countries

affected by a significant drop in export income or sudden increases in import prices<sup>11</sup>. In the American hemisphere, only nine countries have access to ESF funds: Bolivia, Dominica, Grenada, Guyana, Haiti, Honduras, Nicaragua, St. Lucia and St. Vincent and the Grenadines. Other countries may access ESF funds, but under less concessionary conditions.

## b. Family Units

Independently of the financial capacity of the countries to face the hefty food bill, the transmission of price increases will benefit families that are “net producers” of food, but will seriously affect “net consumers”, even those involved in agriculture, in cases where their earned income or proceeds from the sale of the products is not able to offset increased food expenditures.

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<sup>11</sup> The ESF funds are only available for low-income countries, that is to say, countries with a per capita income below US\$1,025 per annum. However, some small island economies have been included as beneficiaries even though their per capita income exceeds that amount.

The consequences of this surge in agricultural prices, which it would seem will continue in the medium term, will vary widely for the various interest groups involved in the sector and the various regions of each country. Among these, the following might be considered:

1. Agricultural producers will benefit directly through increased income to the extent that the international prices are passed on to the various levels of the domestic market. Despite the fact that farmers also face increased costs as a result of increased prices for fertilizers, pesticides and fuels, it is highly possible that the impact will not substantially erode the increase in their earning capacity. What is more, the possible impact of these incentives to produce on employment and agricultural wages may be highly positive in the fight against poverty, which is most severe in the rural areas. Few economic policy instruments can have the necessary scope and coverage to reach the rural poor like the price system.
2. The increase in food prices is directly affecting the expense budgets of families that are “net consumers”, especially urban families or rural workers not involved in agriculture that will offer the direct benefit of increased income for

agricultural activity. However, also in this group are many families involved in agriculture in the Latin American countries, known as family subsistence agriculture, because these are agricultural self-sufficiency units and their income is insufficient in terms of meeting family needs<sup>12</sup>.

A recent FAO/IDB study covering six countries of the region found that in Mexico, 44% of agricultural units fall into the category of “family subsistence agriculture”, whereas in Nicaragua, around 74% of units can be classified as belonging to that category. In other words, even in the rural area, the impact of the high prices of food can be very serious in terms of food insecurity in the population.

<b>Table 5. Units of family subsistence agriculture: Share in total agriculture</b>		
<b>Country</b>	<b>In units</b>	<b>In surface area</b>
Brazil	58.4%	14.3%
Chile	47.6%	5.2%
Colombia	69.0%	33.8%
Ecuador	54.1%	20.3%
Mexico	44.1%	22.2%
Nicaragua	74.4%	30.0%

Source: Echenique, 2007.

<sup>12</sup> Family subsistence agriculture is more oriented towards self-reliance, but lands and income generated from production are not sufficient to ensure family reproduction needs, which leads to efforts to find gainful employment outside or within the agricultural sector. See page 41 in Echenique, Jorge (2007).



Food assistance programs targeting populations at risk in both the urban and rural areas will need to be increased in the short term. In many countries in the Latin American region, food programs exist but they are linked to education, health, employment and poverty; these, however, could be expanded in the near future.

3. The increase in the prices of grains directly affects the cost of producing balanced nutrition for animals and the final prices of meat, dairy products and eggs, which involve a high production cost in terms of providing balanced nutrition. It is important to analyze the price transmission in the principal value chains in the agri-food sector in the countries of the region to facilitate their adjustment to the new market situation.

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4. The increase in agricultural prices brought about by the increase in the demand for new uses will also make it possible for more competitors to remain in the domestic and international markets to the extent that certain agricultural products will become or remain more profitable in places where they were not previously. In other words, many marginal agricultural areas may be incorporated into production and new producers will enter the domestic market.

## Conclusions

- At the hemispheric level, various situations exist. The countries of South America except for Uruguay, do not have problems with the increased food prices because they are net exporters of food or exporters of oil or minerals for which the terms of trade have improved in recent years, and they have large balance of trade surpluses.
- The Caribbean countries have problems with the increased food bills because they are net importers of food and oil, except for Trinidad and Tobago, where profits from oil and its derivatives have enabled them to pay the imported food bill.
- The Central American countries and Panama, except for Costa Rica, do not produce enough food and the terms of trade have deteriorated in all of them. The deficit in their balance of trade also increased in the period 2005-2006.
- The impact on rural families will also vary significantly among countries and among regions in the same country, depending on the degree of external price transmission to their domestic markets, their production structure and the composition of their agricultural units (commercial agriculture and family subsistence agriculture).
- In population groups, the “net agricultural producers” will benefit directly from increased income to the extent that the international price increases are passed on to the domestic market, at all levels. Despite the fact that farmers have also seen their costs increase (fertilizers, pesticides and fuel), it is highly possible that the impact will not significantly erode their profit margin.
- However, in the case of family subsistence agriculture, which in many countries of the hemisphere, involves a high proportion of agricultural units and which comprises the “net consumers of food”, their situation will depend on the increase in agricultural wages and other “off-farm” income, brought about by the upturn in commercial agricultural production. In the medium term, these production incentives can have a positive impact on employment and agricultural wages, which could be highly positive in fighting poverty.

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# Résumé / Resumo / Resumen

## ► Évolution des prix des produits agricoles: répercussions possibles sur l'agriculture de l'Amérique latine et des Caraïbes

**A**u cours des trois dernières années, les prix des denrées agricoles ont enregistré une forte croissance, inférieure toutefois à celle affichée par les combustibles, les métaux et les matières premières industrielles. Parmi les denrées agricoles, ce sont les céréales, les huiles et les produits laitiers qui ont subi les plus fortes hausses. Les effets de la hausse des prix internationaux sur la production, le commerce et la consommation dans chaque pays dépendent de la mesure dans laquelle ces prix se répercutent dans les marchés nationaux. Les facteurs qui déterminent ces effets sont nombreux et comprennent notamment : le degré de dépendance de la production ou de la consommation intérieure vis-à-vis des exportations ou des importations; le niveau de concurrence et l'existence de distorsions dans les marchés intérieurs; les politiques commerciales en vigueur, et les variations du taux de change de la monnaie nationale par rapport au dollar des États-Unis. Ainsi, les répercussions des prix élevés seront très différentes selon les pays et parmi les différentes couches de la population. En ce qui concerne les pays, ces hausses profiteront aux pays exportateurs nets des produits concernés et porteront préjudice aux importateurs nets qui verront leur facture d'importation de denrées alimentaires augmenter. Du point de vue des unités familiales, celles qui sont des «producteurs nets» de denrées alimentaires bénéficieront du transfert des hausses de prix, alors que les «consommateurs nets» seront gravement touchés, même s'ils ont un lien avec le secteur agricole.

## ► Aumento dos preços dos produtos agrícolas: Possível impacto na agricultura da América Latina e do Caribe

**T**em sido considerável o aumento dos preços agrícolas nos últimos três anos, embora não tão acentuado como no caso dos combustíveis, metais e insumos industriais. Na linha dos produtos agrícolas, os maiores aumentos afetam os grãos, óleos e derivados do leite. Os efeitos dos aumentos dos preços internacionais na produção, no comércio e no consumo em cada país dependem do grau em que esses preços são repassados aos mercados nacionais. São vários os fatores que definem esses efeitos, entre os quais os seguintes: o grau de dependência da produção ou do consumo interno na exportação ou importação, o nível de competição e a existência de distorções nos mercados internos, nas políticas comerciais aplicadas e nas variações da taxa de câmbio das moedas nacionais com relação ao dólar norte-americano. Em vista disso, o impacto da elevação dos preços será bastante diferente entre os países e entre as camadas da população. No nível dos países, as altas nos preços beneficiarão os exportadores líquidos desses produtos e prejudicarão os importadores líquidos, cuja fatura de importação de alimentos vem aumentando. No plano das unidades familiares, o repasse dos aumentos de preços beneficiará as unidades familiares que são “produtoras líquidas” de alimentos, mas afetará seriamente os “consumidores líquidos”, mesmo os vinculados com a agricultura.

## ► Evolución de los precios de productos agrícolas: Posible impacto en la agricultura de América Latina y el Caribe

**E**n los últimos tres años, los precios agrícolas han experimentado un fuerte crecimiento, aunque menor que el alcanzado por los combustibles, metales y los insumos industriales. Dentro de los productos agrícolas, los mayores aumentos se han presentado en cereales, aceites y lácteos. Los efectos de los aumentos de precios internacionales sobre la producción, comercio y consumo en cada país dependen del grado en que dichos precios se transmitan a los respectivos mercados nacionales. Son muchos los factores que definen estos efectos, entre ellos: la magnitud de la dependencia de la producción o consumo interno en la exportación o importación, el nivel de competencia y la existencia de distorsiones en los mercados domésticos, las políticas comerciales aplicadas y las variaciones del tipo de cambio de la moneda nacional respecto del dólar estadounidense. Por lo anterior, el impacto de los altos precios será muy distinto entre países y entre los estratos de la población. A nivel de países, estas alzas beneficiarán a aquellos que son exportadores netos de estos productos y perjudicarán a los importadores netos, cuya factura de importación alimentaria se ha visto incrementada. A nivel de unidades familiares, la transmisión de los aumentos de precios beneficiará a los que son “productores netos” de alimentos, pero afectará seriamente a los “consumidores netos”, aun aquellos vinculados con la agricultura.