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Improving the Access of Mercosur's Agriculture Exports to United States: Lessons from NAFTA

Pablo Sanguinetti
Eduardo Bianchi

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IMPROVING THE ACCESS OF MERCOSUR'S AGRICULTURE EXPORTS TO UNITED STATES: LESSONS FROM NAFTA

Pablo Sanguinetti*
Eduardo Bianchi**

I. INTRODUCTION

In the last 15 years or so Mercosur countries have implemented trade liberalization reforms both unilaterally and at regional level. These reforms have been successful in promoting overall trade flows, but not so much with respect to exports to developed countries. This is particularly the case with the United States (US) and the European Union (EU) markets. For example, in the case of Argentina, exports to the EU have increased only 20% between 1990-2000. Exports to US have grown at higher rates but still below those observed for the rest of the world.

Why is it that Mercosur products have been unable to increase their access to these markets? One reason that clearly outstands is that these countries have developed a comparative advantage in agricultural (both primary and manufactured) products and these items have been the ones that faced the strongest protection in the central economies (see Nogués, *et al.* [2001]).

In this report we will investigate in detail the pattern of agriculture exports of Mercosur countries to US. We will show how the Mercosur region has significantly lost participation in the US import market in the last 13 years mainly as a consequence of the increase in imports from US's NAFTA partners, Canada and Mexico.

In order to understand the reasons behind this phenomenon we first identify those agriculture products for which Mercosur countries have developed strong comparative advantages. In particular we compute the Balassa [1967] indicator of revealed comparative advantage both world-wide and for the US market. This methodology permits to concentrate the analysis on relative few products (10% out of approximately 500 6-digit agriculture items) encompassing almost 90% of agriculture exports of these countries. In addition, the comparison of the indicators calculated world-wide and for US can help us to single out those products for which these countries are world-wide efficient but this is not reflected in the US market.

We then study the extent to which this discrepancy is associated with the presence of trade barriers. In particular we give a detailed account of both tariff and non-tariff restrictions affecting these agriculture items in the US. We do find that in some products the presence of these restrictions has been significant. For example, in the cases of Bovine Meat Fresh and Frozen, Chicken and

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Turkey Cuts, Powder Milk, Cheeses and Butter, Citrus (including orange) Juice, Sugar, Peanuts and Tobacco.

The next step in the study is to evaluate the consequences of these barriers on Mercosur countries' exports and, in particular, to assess the chances they can be eliminated through some type of bilateral negotiations between USA and Mercosur. An ex-ante perspective of the type of deal that Mercosur might strike with US can be obtained from a detailed analysis of what US has negotiated in the NAFTA treaty. Thus, an important part of the report is dedicated to the analysis of the NAFTA agricultural provisions. These provisions took the form of separate agreements between US and Canada and US and Mexico.

The description we present of the NAFTA agriculture provisions shows that indeed some of the Mercosur key agriculture products were among the most politically sensitive items. In spite of this, NAFTA, at least in the case of the Mexico-US Agreement, was successful in assuring free trade in these agriculture items in the long run. The question then arises if the same could happen with Mercosur. There are very important non-economic reasons that have pushed the US government to establish a FTA with Mexico and Canada. Among them the most important is the condition of bordering states and how this influences issues associated to migration, internal security and defense. Clearly these other non-trade reasons are not as important in the case of Mercosur countries and will reduce the impulse of US authorities to pursue such negotiations.

We look at recent US legislation for a more updated inference about the political will of US to pursue further liberalization in agriculture. We conclude that the Fast Track legislation does impose new restrictions to achieve further liberalization especially within the context of a multilateral and a continental scheme (FTAA). Yet, if anything, it tilts the remaining possibilities toward less comprehensive (in terms of the involved countries) bilateral or regional free trade agreements in which US exporters can benefit from reciprocal market access gains.

On the other hand, the Farm Bill has produced a change in the design of some sector-specific schemes (i.e. Peanuts) that makes them less inconsistent with trade liberalization. This will increase the possibility that in the future the US government may decide to lower trade barriers for this product. Still on other products, like Milk, a key commodity from the point of view of Mercosur exports, the government support is still oriented at maintaining current prices. We may take the decision of the Congress (of not changing the support scheme for Dairy) as a signal that further liberalization for this product is not "politically" desired.

The rest of the present report is organized as follows. Next chapter presents the analysis of the US agriculture import market and Mercosur exports. Chapter III describes the NAFTA agriculture provisions and in Chapter IV we discuss the lessons these negotiations left for a potential agreement between the US and Mercosur encompassing the agriculture sector. In Chapter V we present a summary of our main conclusions.

II. THE US AGRICULTURE IMPORT MARKET AND MERCOSUR EXPORTS

When analyzing the possibilities of a bilateral trade agreement between Mercosur and US and its consequences on agriculture trade, we have to bear in mind that both US and Mercosur countries are very important players in world agriculture markets, reflecting their comparative advantages in the production of these goods. Both regions have been net world suppliers of agriculture goods and for some specific commodities like Soybean, Corn or Wheat, US and Mercosur countries are the most important world exporters (i.e. in the case of Soybeans, Argentina, Brazil and US represent jointly 80% of total world exports).

So it may be the case that there are no many gains to be realized from an agreement that aims at the liberalization of agriculture between these two markets. In order to assess this, in this chapter we will discuss in great detail the structure of agriculture imports of US and the export supply of Mercosur. We will do that at various levels of aggregation and using different types of indicators. We start in the next subsection looking at aggregate trade data.

A. The US Market for Agriculture Imports and Mercosur Exports: An Aggregate Analysis

From the perspective of Mercosur exports, how important is the import market for agriculture products in the US? Which are the major suppliers in that market? How Mercosur exports to the US have performed in recent years? In Table 1 we present information of the evolution of US agriculture imports, non-agriculture and total imports for the 1989-2001 period. It is clear that agriculture imports are a very small proportion of total US imports. Though they have increased almost 50% in real terms along the considered period, the rate of increase has been lower than that corresponding to non- agriculture products (which rose almost 100% in real terms during the same period). As a consequence, agriculture's import share has declined over time to reach 3.9% in 2001. Still in terms of its absolute value, and specially when compared to the potential agriculture export of Mercosur countries, US imports of agriculture goods are quite significant: 45 billion dollars in 2001.

Table 2 shows that at the beginning of the nineties the key suppliers of agriculture exports to US were in descending order of importance, the EU, Canada, Mexico, Mercosur, Australia and New Zealand. It is quite remarkable the increasing significance of Canada as exporter of agriculture goods into the US market since 1989 (see Figure 1). US agriculture imports from this country rose 150% (two and half times) in real terms, increasing its share by 10 percentage points (from 13.5 in 1989 to 23.5 in 2001).

It is easy to relate this increase to the CUSTA agreement celebrated between US and Canada, which went into effect in 1989. As we will discuss in detail in Chapter III, this agreement was quite comprehensive with respect to agriculture, eliminating border barriers to trade for most products (though there were some conspicuous exceptions), eliminating export subsidies in bilateral trade flows, and imposing more discipline on domestic farm programs. The consequence of establishing an FTA encompassing agriculture's trade is also reflected in the evolution of US imports from Mexico. The enactment of the NAFTA agreement, from 1994 onwards, is clearly associated with a raise in almost 2 percentage points in the Mexican import share. Measured in real dollars Mexico's agriculture exports to US almost doubled between 1989-1991 and 1999-2001 (84% increase).

**TABLE 1
UNITED STATES IMPORTS, 1989-2001**

	In current million CIF												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Agric. goods (1)	24,668	26,323	26,063	28,382	28,650	30,466	33,244	37,020	40,328	41,478	42,891	44,669	45,372
Non Agric. goods	462,891	486,209	478,262	517,693	568,744	652,389	733,383	779,826	849,824	896,344	1,008,867	1,200,799	1,124,155
<i>Total</i>	<i>487,558</i>	<i>512,533</i>	<i>504,325</i>	<i>546,074</i>	<i>597,394</i>	<i>682,855</i>	<i>766,626</i>	<i>816,846</i>	<i>890,152</i>	<i>937,822</i>	<i>1,051,757</i>	<i>1,245,467</i>	<i>1,169,528</i>

	In 2001 US\$ million (2)												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Agric. goods (1)	30,552	31,071	30,132	32,413	32,326	34,156	36,571	39,670	43,051	44,652	45,374	45,543	45,372
Non Agric. goods	573,316	573,906	552,929	591,228	641,718	731,404	806,778	835,655	907,210	964,924	1,067,275	1,224,292	1,124,155
<i>Total</i>	<i>603,869</i>	<i>604,978</i>	<i>583,061</i>	<i>623,642</i>	<i>674,044</i>	<i>765,559</i>	<i>843,349</i>	<i>875,325</i>	<i>950,261</i>	<i>1,009,575</i>	<i>1,112,649</i>	<i>1,269,835</i>	<i>1,169,528</i>

	% Share												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Agric. goods (1)	5.1	5.1	5.2	5.2	4.8	4.5	4.3	4.5	4.5	4.4	4.1	3.6	3.9
Non Agric. goods	94.9	94.9	94.8	94.8	95.2	95.5	95.7	95.5	95.5	95.6	95.9	96.4	96.1
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Notes: (1) NAFTA Article 708 definition of "agricultural good".

(2) Adjusted by US Producer Price Index.

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

**TABLE 2
UNITED STATES AGRICULTURAL IMPORTS, 1989-2001 (1)**

From	In current million CIF												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Canada	3,341	3,761	3,936	4,844	5,547	5,933	6,254	7,490	8,220	8,574	8,828	9,494	10,649
Mexico	2,426	2,867	2,785	2,641	3,004	3,179	4,178	4,155	4,543	5,122	5,362	5,682	5,858
Canada + Mexico	5,767	6,628	6,721	7,485	8,551	9,111	10,432	11,645	12,763	13,696	14,190	15,177	16,507
EU (15)	5,582	5,880	5,691	6,156	6,052	6,594	7,185	7,883	8,521	9,074	9,768	10,218	10,269
Mercosur	2,026	2,196	2,064	2,031	2,007	1,883	1,809	2,240	2,366	1,998	2,315	2,000	1,795
Australia	963	1,194	1,181	1,106	1,050	974	779	807	931	1,130	1,321	1,641	1,816
New Zealand	771	748	771	741	696	657	659	640	729	812	855	1,005	1,094
<i>Subtotal</i>	<i>15,109</i>	<i>16,646</i>	<i>16,429</i>	<i>17,518</i>	<i>18,357</i>	<i>19,220</i>	<i>20,864</i>	<i>23,215</i>	<i>25,309</i>	<i>26,710</i>	<i>28,450</i>	<i>30,040</i>	<i>31,481</i>
<i>Total World</i>	<i>24,668</i>	<i>26,323</i>	<i>26,063</i>	<i>28,382</i>	<i>28,650</i>	<i>30,466</i>	<i>33,244</i>	<i>37,020</i>	<i>40,328</i>	<i>41,478</i>	<i>42,891</i>	<i>44,669</i>	<i>45,372</i>

From	In 2001 US\$ million (2)												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Canada	4,138	4,439	4,551	5,532	6,258	6,651	6,880	8,026	8,775	9,230	9,339	9,680	10,649
Mexico	3,004	3,384	3,220	3,016	3,390	3,564	4,596	4,452	4,850	5,514	5,673	5,794	5,858
Canada + Mexico	7,142	7,824	7,771	8,548	9,648	10,215	11,476	12,478	13,625	14,744	15,012	15,474	16,507
EU (15)	6,914	6,940	6,580	7,030	6,829	7,393	7,904	8,447	9,097	9,768	10,334	10,418	10,269
Mercosur	2,510	2,592	2,386	2,319	2,265	2,111	1,990	2,401	2,525	2,151	2,449	2,039	1,795
Australia	1,193	1,409	1,366	1,263	1,185	1,092	857	865	993	1,216	1,398	1,673	1,816
New Zealand	955	883	891	846	785	736	725	686	778	874	905	1,025	1,094
<i>Subtotal</i>	<i>18,714</i>	<i>19,648</i>	<i>18,994</i>	<i>20,007</i>	<i>20,712</i>	<i>21,548</i>	<i>22,952</i>	<i>24,877</i>	<i>27,018</i>	<i>28,754</i>	<i>30,097</i>	<i>30,628</i>	<i>31,481</i>
<i>Total World</i>	<i>30,552</i>	<i>31,071</i>	<i>30,132</i>	<i>32,413</i>	<i>32,326</i>	<i>34,156</i>	<i>36,571</i>	<i>39,670</i>	<i>43,051</i>	<i>44,652</i>	<i>45,374</i>	<i>45,543</i>	<i>45,372</i>

TABLE 2 (cont.)

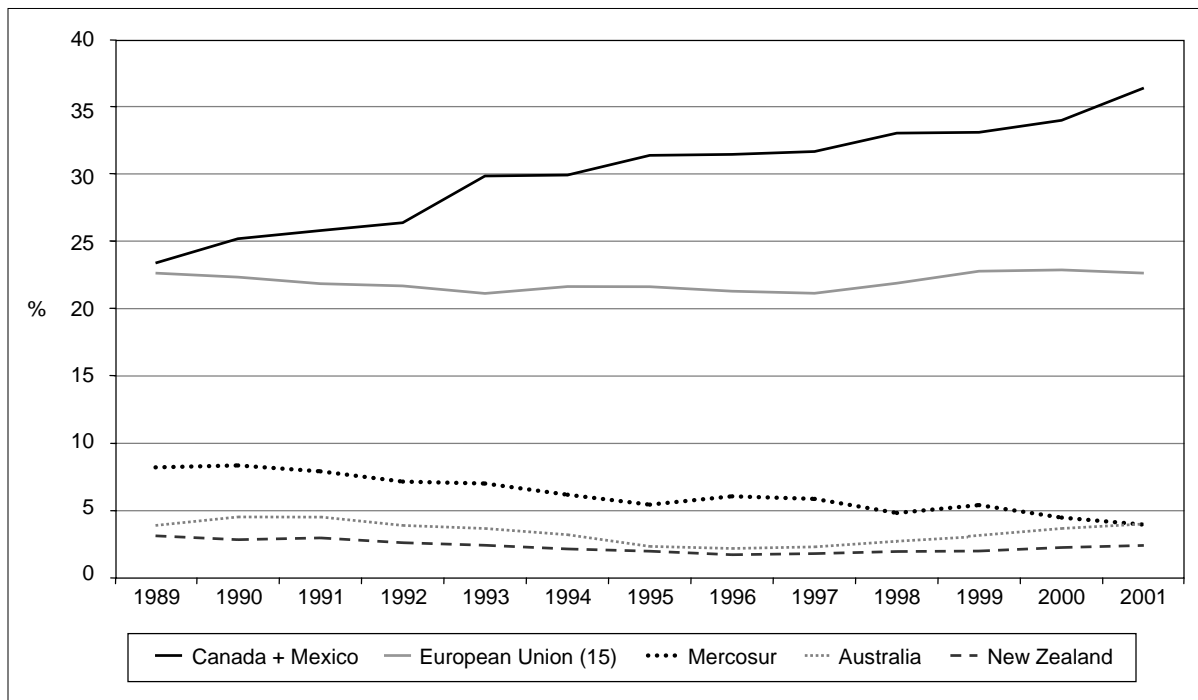
From	% Share												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Canada	13.5	14.3	15.1	17.1	19.4	19.5	18.8	20.2	20.4	20.7	20.6	21.3	23.5
Mexico	9.8	10.9	10.7	9.3	10.5	10.4	12.6	11.2	11.3	12.3	12.5	12.7	12.9
Canada + Mexico	23.4	25.2	25.8	26.4	29.8	29.9	31.4	31.5	31.6	33.0	33.1	34.0	36.4
EU (15)	22.6	22.3	21.8	21.7	21.1	21.6	21.6	21.3	21.1	21.9	22.8	22.9	22.6
Mercosur	8.2	8.3	7.9	7.2	7.0	6.2	5.4	6.1	5.9	4.8	5.4	4.5	4.0
Australia	3.9	4.5	4.5	3.9	3.7	3.2	2.3	2.2	2.3	2.7	3.1	3.7	4.0
New Zealand	3.1	2.8	3.0	2.6	2.4	2.2	2.0	1.7	1.8	2.0	2.0	2.3	2.4
<i>Subtotal</i>	<i>61.3</i>	<i>63.2</i>	<i>63.0</i>	<i>61.7</i>	<i>64.1</i>	<i>63.1</i>	<i>62.8</i>	<i>62.7</i>	<i>62.8</i>	<i>64.4</i>	<i>66.3</i>	<i>67.3</i>	<i>69.4</i>
<i>Total World</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Notes: (1) NAFTA Article 708 definition of "agricultural good" for Canada, Mexico and Mercosur, and HTS Chapters 1 to 24, excluding Chapter 3 (Fish), for Australia, EU and New Zealand.

(2) Adjusted by US Producer Price Index.

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

FIGURE 1
SHARE ON US TOTAL AGRICULTURAL IMPORTS, 1989-2001



We see that this significant increase of the US import share from its neighboring countries came at the expense of some of its third country suppliers. While the EU was able to maintain its participation in the American market, we observe declines for the cases of Australia, New Zealand, and most notably, for Mercosur. As shown in Table 2, Mercosur share went down from an average of 8% in 1989-1991 to 4.5% in 1999-2001. This was a direct consequence of the fall in the real value of Mercosur sales to US over the considered period. They were about 2,400 million (2001 dollars) in 1989-1991 and they ended up at an average of 2,000 million in 1999-2001 (20% real decline).

Was this fall equal across Mercosur countries? Table 3 shows that the big loser, which explains the entire decline in Mercosur's participation in US imports, is Brazil. This country was in 1989-1990 the Mercosur's largest agriculture exporter to US with a value of exports around US\$ 1,500 million and a share of about 6% in US agriculture imports (more than three times that of Argentina). In years 2000-2001 the value of Brazilian exports went down to US\$ 1,100 million, representing less than 2.5% of total US agriculture imports. In real dollars the fall in exports was around 50% between 1989-1991 and 1999-2001. On the other hand, both Argentina and Uruguay maintained a more or less constant share in US purchases of around 1.6 and 0.1 percent respectively.

TABLE 3
UNITED STATES AGRICULTURAL IMPORTS, 1989-2001 (1)

From	In current US\$ million CIF												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Argentina	426	438	596	534	434	421	542	764	771	694	732	729	672
Brazil	1,562	1,708	1,415	1,445	1,529	1,425	1,226	1,408	1,516	1,236	1,507	1,188	1,045
Paraguay	10	15	11	7	11	7	14	7	10	11	12	13	13
Uruguay	29	35	42	44	33	30	27	61	68	57	64	69	64
<i>Total Mercosur</i>	<i>2,026</i>	<i>2,196</i>	<i>2,064</i>	<i>2,031</i>	<i>2,007</i>	<i>1,883</i>	<i>1,809</i>	<i>2,240</i>	<i>2,366</i>	<i>1,998</i>	<i>2,315</i>	<i>2,000</i>	<i>1,795</i>
<i>Total World</i>	<i>24,668</i>	<i>26,323</i>	<i>26,063</i>	<i>28,382</i>	<i>28,650</i>	<i>30,466</i>	<i>33,244</i>	<i>37,020</i>	<i>40,328</i>	<i>41,478</i>	<i>42,891</i>	<i>44,669</i>	<i>45,372</i>

From	In 2001 US\$ million (2)												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Argentina	528	517	689	610	490	472	596	819	823	747	775	744	672
Brazil	1,934	2,016	1,636	1,651	1,725	1,597	1,349	1,509	1,618	1,331	1,594	1,211	1,045
Paraguay	12	18	13	8	13	8	15	8	11	12	13	14	13
Uruguay	35	42	49	50	37	34	30	65	73	62	68	71	64
<i>Total Mercosur</i>	<i>2,510</i>	<i>2,592</i>	<i>2,386</i>	<i>2,319</i>	<i>2,265</i>	<i>2,111</i>	<i>1,990</i>	<i>2,401</i>	<i>2,525</i>	<i>2,151</i>	<i>2,449</i>	<i>2,039</i>	<i>1,795</i>
<i>Total World</i>	<i>30,552</i>	<i>31,071</i>	<i>30,132</i>	<i>32,413</i>	<i>32,326</i>	<i>34,156</i>	<i>36,571</i>	<i>39,670</i>	<i>43,051</i>	<i>44,652</i>	<i>45,374</i>	<i>45,543</i>	<i>45,372</i>

From	% Share												
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Argentina	1.7	1.7	2.3	1.9	1.5	1.4	1.6	2.1	1.9	1.7	1.7	1.6	1.5
Brazil	6.3	6.5	5.4	5.1	5.3	4.7	3.7	3.8	3.8	3.0	3.5	2.7	2.3
Paraguay	0.04	0.06	0.04	0.03	0.04	0.02	0.04	0.02	0.02	0.03	0.03	0.03	0.03
Uruguay	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1
<i>Total Mercosur</i>	<i>8.2</i>	<i>8.3</i>	<i>7.9</i>	<i>7.2</i>	<i>7.0</i>	<i>6.2</i>	<i>5.4</i>	<i>6.1</i>	<i>5.9</i>	<i>4.8</i>	<i>5.4</i>	<i>4.5</i>	<i>4.0</i>
<i>Total World</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Notes: (1) NAFTA Article 708 definition of "agricultural good".

(2) Adjusted by US Producer Price Index.

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

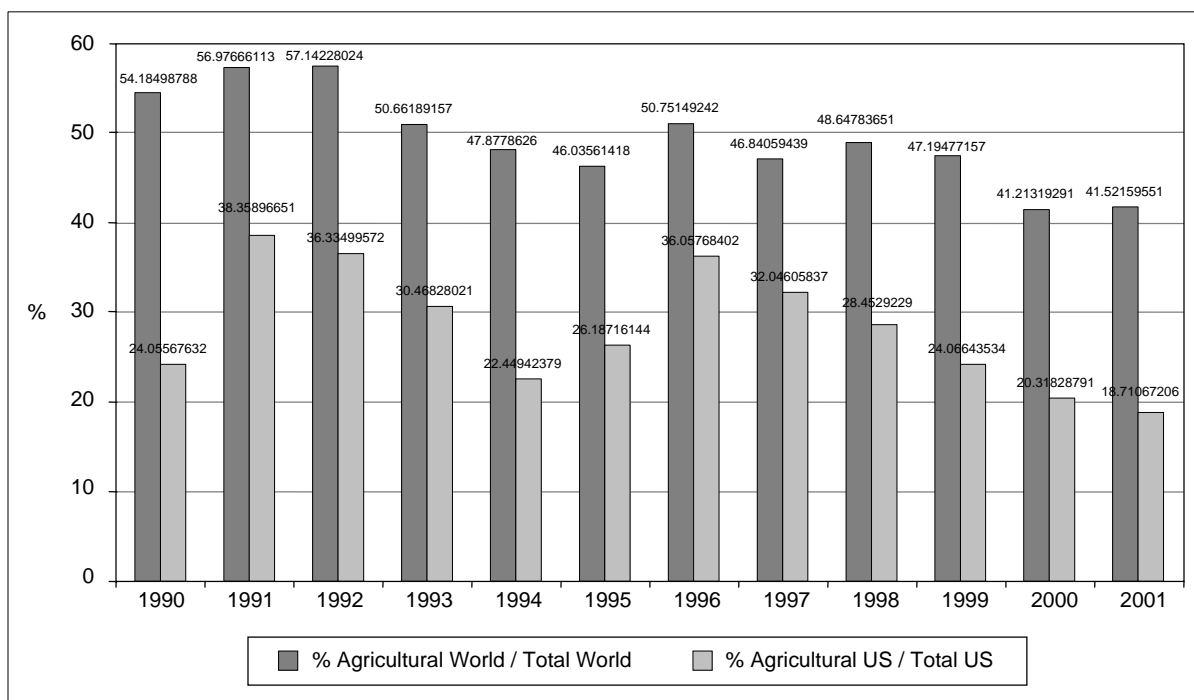
What explains this bad performance of Mercosur, and of Brazil in particular, in the US market? Could it be associated to particular trade barriers faced by these countries (an issue we will discuss in detail in Chapter II.D)? or was it originated in shocks affecting agriculture production of these countries world-wide? Figure 2 and 3 (see also Tables 4 and 5) can help us to address this question. In these graphs we present, for Argentina and Brazil, the share of agriculture exports on total exports,

calculated both for the world and for the US market. On one hand we see that in both countries the exports to the world are more intensive in agriculture goods than those going to the US market. Comparing Argentina and Brazil we see that Argentina's exports are more concentrated in agriculture (around 42% in 2000-2001) than those of Brazil (around 26% in 2000-2001). This level of concentration has been declining for Argentina in recent years and has remained more or less stable for Brazil (still in both countries we observe relative high values in 1996-1997 when international prices were also high).

Perhaps more interestingly is that for both countries we observe a significant decline of the share of US agriculture exports over total US exports (the fall is more significant if we compare 2000-2001 with 1996-1997, but it is also important between the extreme years of the considered period). This decline of the US share is much more significant than that corresponding to exports going to the world. This is specially the case with Brazil.

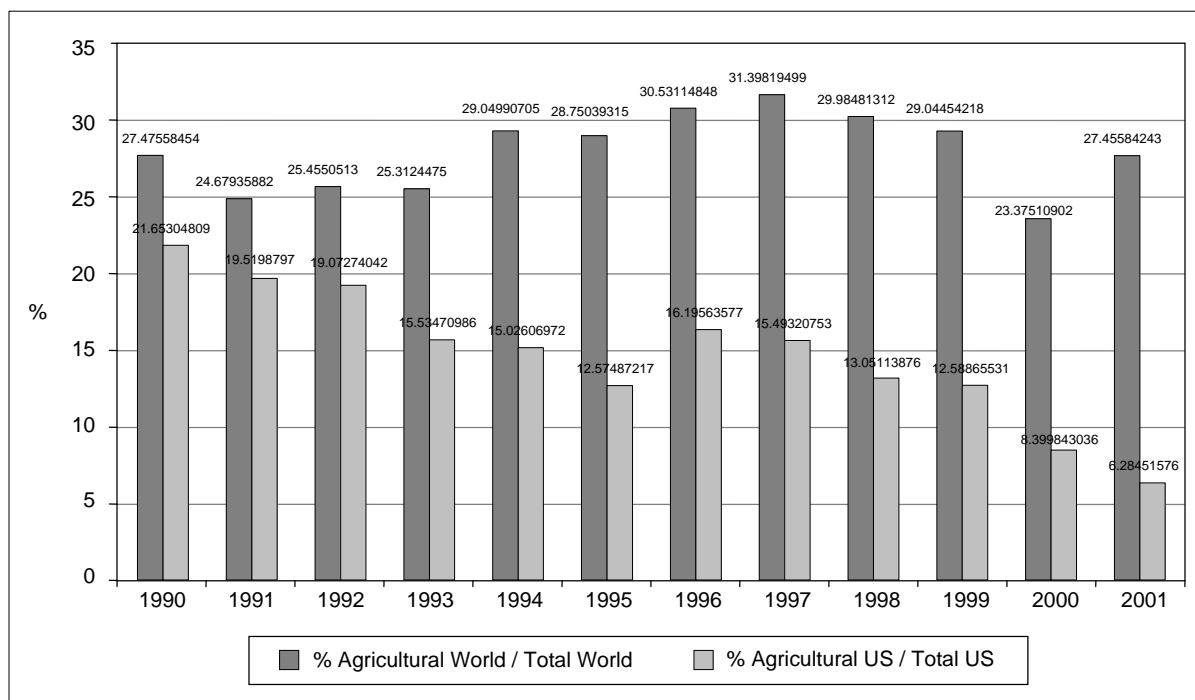
This drastic change in the composition of export to US may indicate that Mercosur countries, in particular Brazil, have met in recent years stronger difficulties to access into that market.¹ Consequently, some exports have to be reoriented to third countries. Clearly, this difficulty may be in part related to the tariff preference that Canada and Mexico have obtained through the FTAs signed with US. In the next subsection, when looking at more disaggregated data, we will try to identify products in which we observe big declines in Mercosur exports to US markets and the extent to which those sales were replaced by exports from Canada and Mexico.

FIGURE 2
ARGENTINE EXPORTS, 1990-2001



¹ It could also be consistent with a rapid expansion of Brazil's exports of products such as soybeans where the US market is small due to the fact that US is also a large producer and exporter. We thank an anonymous referee for pointing out this issue.

**FIGURE 3
BRAZILIAN EXPORTS, 1990-2001**



**TABLE 4
ARGENTINE EXPORTS, 1990-2001**

(A) TOTAL EXPORTS

To	In current US\$ million CIF											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
United States	1,665	1,210	1,325	1,264	1,724	1,770	1,944	2,179	2,191	2,628	3,111	2,806
Other	10,687	10,768	10,910	11,854	14,115	19,193	21,866	24,252	24,250	20,704	23,299	23,417
<i>Total World</i>	<i>12,353</i>	<i>11,978</i>	<i>12,235</i>	<i>13,118</i>	<i>15,839</i>	<i>20,963</i>	<i>23,811</i>	<i>26,431</i>	<i>26,441</i>	<i>23,333</i>	<i>26,409</i>	<i>26,223</i>

To	% Share											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
United States	13.5	10.1	10.8	9.6	10.9	8.4	8.2	8.2	8.3	11.3	11.8	10.7
Other	86.5	89.9	89.2	90.4	89.1	91.6	91.8	91.8	91.7	88.7	88.2	89.3
<i>Total World</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

(B) AGRICULTURAL EXPORTS (1)

To	In current US\$ million CIF											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
United States	401	464	481	385	387	463	701	698	623	633	632	525
Other	6,293	6,360	6,510	6,261	7,196	9,187	11,383	11,682	12,240	10,379	10,252	10,363
<i>Total World</i>	<i>6,693</i>	<i>6,825</i>	<i>6,991</i>	<i>6,646</i>	<i>7,583</i>	<i>9,650</i>	<i>12,084</i>	<i>12,380</i>	<i>12,863</i>	<i>11,012</i>	<i>10,884</i>	<i>10,888</i>

TABLE 4 (cont.)

To	% Share											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
United States	6.0	6.8	6.9	5.8	5.1	4.8	5.8	5.6	4.8	5.7	5.8	4.8
Other	94.0	93.2	93.1	94.2	94.9	95.2	94.2	94.4	95.2	94.3	94.2	95.2
<i>Total World</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Note: (1) HTS Chapters 1 to 24, excluding Chapter 3 (Fish), for period 1990-1995 and NAFTA Article 708 definition of "agricultural good" for period 1996-2001.

Source: Own elaboration upon information obtained from INDEC.

**TABLE 5
BRAZILIAN EXPORTS, 1990-2001**

(A) TOTAL EXPORTS

To	In current US\$ million CIF											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
United States	7,594	6,264	6,933	7,843	8,816	8,683	9,183	9,276	9,747	10,675	13,181	14,190
Other	23,819	25,356	28,860	30,711	34,729	37,823	38,564	43,718	41,393	37,337	41,905	44,033
<i>Total World</i>	<i>31,414</i>	<i>31,620</i>	<i>35,793</i>	<i>38,555</i>	<i>43,545</i>	<i>46,506</i>	<i>47,747</i>	<i>52,994</i>	<i>51,140</i>	<i>48,011</i>	<i>55,086</i>	<i>58,223</i>

To	% Share											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
United States	24.2	19.8	19.4	20.3	20.2	18.7	19.2	17.5	19.1	22.2	23.9	24.4
Other	75.8	80.2	80.6	79.7	79.8	81.3	80.8	82.5	80.9	77.8	76.1	75.6
<i>Total World</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

(B) AGRICULTURAL EXPORTS (1)

To	In current US\$ million CIF											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
United States	1,644	1,223	1,322	1,218	1,325	1,092	1,487	1,437	1,272	1,344	1,107	892
Other	6,987	6,581	7,789	8,541	11,325	12,279	13,090	15,202	14,062	12,601	11,769	15,094
<i>Total World</i>	<i>8,631</i>	<i>7,804</i>	<i>9,111</i>	<i>9,759</i>	<i>12,650</i>	<i>13,371</i>	<i>14,578</i>	<i>16,639</i>	<i>15,334</i>	<i>13,945</i>	<i>12,876</i>	<i>15,986</i>

To	% Share											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
United States	19.1	15.7	14.5	12.5	10.5	8.2	10.2	8.6	8.3	9.6	8.6	5.6
Other	80.9	84.3	85.5	87.5	89.5	91.8	89.8	91.4	91.7	90.4	91.4	94.4
<i>Total World</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Note: (1) HTS Chapters 1 to 24, excluding Chap 3 (Fish), for period 1990-1995 and year 2001 and NAFTA Article 708 definition of "agricultural good" for period 1996-2001.

Source: Own elaboration upon information obtained from SECEX.

B. Did NAFTA Deviate Trade from Mercosur Origins? A Preliminary Look Using Chapter Level Data

In order to assess the evolution and composition of US total agricultural imports during the 90's, we now compare average values corresponding to years 1989-1992, representing a "pre-NAFTA period", with those average values arising from years 1998-2001, corresponding to a "post-NAFTA period".

US total agricultural imports averaged almost US\$ 26,400 million during 1989-1992 and US\$ 43,600 million in years 1998-2001, with a difference between both periods of US\$ 17,200 million (see Table 6). In both periods, not only the first six HTS chapters represented near 56% of total, but also these chapters were the same, namely: *Beverages* (HTS Chapter 22), *Edible fruit and nuts* (HTS Chapter 08), *Coffee, tea and spices* (HTS Chapter 09), *Meat* (HTS Chapter 02), *Edible vegetables* (HTS Chapter 07) and *Preparations of vegetables and fruits* (HTS Chapter 20). This suggests that both US total agricultural imports structures (pre-NAFTA and post-NAFTA) were very similar.

Of the indicated increase in US agriculture imports, almost 50% corresponds to additional exports coming from NAFTA countries. In this regard US agricultural imports from Canada increased from almost US\$ 4,000 million in 1989-1992 to US\$ 9,400 million in 1998-2001, a difference of US\$ 5,400 million, with the share of Canada in US total agricultural imports increasing from 15.1% to 21.5% (see Table 7). In both periods, the first seven groups of agricultural products accounted for almost the same share of total US agricultural imports from Canada, 65%. These are *Meat* (HTS Chapter 02), *Live animals* (HTS Chapter 01), *Beverages* (HTS Chapter 22), *Preparations of cereals, flour, starch or milk* (HTA Chapter 19), *Cereals* (HTS Chapter 10), *Preparation of vegetable and fruits* (HTS Chapter 20), *Edible vegetables* (HTS Chapter 07).

TABLE 6
UNITED STATES AGRICULTURAL IMPORTS FROM WORLD (1)
COMPOSITION BY MAIN HTS CHAPTERS
In current dollars CIF

HTS Chapter	Average 1989-1992		Average 1998-2001		Difference (B)-(A)
	US\$ million (A)	% Share of total	US\$ million (B)	% Share of total	US\$ million
22-Beverages	3,870	14.7	7,985	18.3	4,115
08-Edible fruit and nuts	2,729	10.4	4,547	10.4	1,818
09-Coffee, tea and spices	2,449	9.3	3,287	7.5	838
02-Meat	2,369	9.0	3,239	7.4	871
07-Edible vegetables	1,332	5.1	3,000	6.9	1,668
20-Preparations of vegetables and fruits	2,085	7.9	2,769	6.4	684
<i>Subtotal</i>	<i>14,834</i>	<i>56.3</i>	<i>24,828</i>	<i>56.9</i>	<i>9,993</i>
Remaining chapters	11,525	43.7	18,775	43.1	7,250
<i>Total</i>	<i>26,359</i>	<i>100.0</i>	<i>43,602</i>	<i>100.0</i>	<i>17,244</i>

Note: (1) NAFTA Article 708 definition of "agricultural good".

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

TABLE 7
UNITED STATES AGRICULTURAL IMPORTS FROM CANADA (1)
COMPOSITION BY MAIN HTS CHAPTERS
 In current dollars CIF

HTS Chapter	Average 1989-1992			Average 1998-2001			Difference (B)-(A)
	US\$ million (A)	% Share of Canada total	% Share of US total	US\$ million (B)	% Share of Canada total	% Share of US total	US\$ million
02-Meat	585	14.7	24.7	1,540	16.4	47.6	956
01-Live animals	762	19.2	64.0	1,268	13.5	65.8	506
22-Beverages	582	14.7	15.0	884	9.4	11.1	302
19-Preparations of cereals, flour, starch or milk	213	5.4	31.0	838	8.9	46.4	625
10-Cereals	244	6.1	56.4	549	5.8	57.4	305
20-Preparations of vegetables and fruits	80	2.0	3.8	499	5.3	18.0	419
07-Edible vegetables	136	3.4	10.2	489	5.2	16.3	353
<i>Subtotal</i>	<i>2,602</i>	<i>65.5</i>	<i>--</i>	<i>6,068</i>	<i>64.6</i>	<i>--</i>	<i>3,465</i>
Remaining chapters	1,368	34.5	--	3,319	35.4	--	1,951
<i>Total</i>	<i>3,971</i>	<i>100.0</i>	<i>15.1</i>	<i>9,387</i>	<i>100.0</i>	<i>21.5</i>	<i>5,416</i>

Note: (1) NAFTA Article 708 definition of "agricultural good".

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

An interesting finding is that in six of the seven main groups of agricultural products imported by US from Canada, the share of Canada in US *total* imports for each group increases between both periods, with the most relevant changes occurring in *Meat* (from 24.7% to 47.6% of US total imports of this chapter), *Preparations of cereals, flour, starch or milk* (from 31% to 46.4%) and preparation of vegetables and fruits (from 3.8% to 18%). As we will see in Chapter III, these tremendous shifts in market shares are clearly associated to the preferential access that CUSTA has created for Canadian suppliers of these products compared to those from third countries.

In the case of Mexico, US agricultural imports from this country increased from almost US\$ 2,700 million in 1989-1992 to US\$ 5,500 million in 1998-2001, a difference of US\$ 2,800 million, with the share of Mexico in US total agricultural imports increasing from 10.2% to 12.6% (see Table 8). The top three products in 1998-2001, *Edible vegetables* (HTS Chapter 07), *Beverages* (HTS Chapter 22) and *Edible fruit and nuts* (HTS Chapter 08) represented 68% of the total in that period while they were 55% of the total in 1989-1992. These three items together with *Coffee, tea and spices; live animals* and *Preparation of vegetables and fruits* accounted for almost the same share in both periods (88%). As a consequence we conclude that US agricultural imports from Mexico got concentrated in the mentioned first three groups, with decreasing shares in the remaining three chapters (see Table 8). Out of the indicated top six groups of products, Mexico gained share in *total* imports in *Beverages* (from 6.5% to 14.6%), *Edible fruit* (from 14.3% to 18.3%) and *Preparation of vegetables and fruits* (from 7.5% to 10.2%). On the other hand, it remained to be the larger supplier of *Edible vegetables* (57.3% of total imports in 1998-2001).

TABLE 8
UNITED STATES AGRICULTURAL IMPORTS FROM MEXICO (1)
COMPOSITION BY MAIN HTS CHAPTERS
 In current dollars CIF

HTS Chapter	Average 1989-1992			Average 1998-2001			Difference (B)-(A) US\$ million
	US\$ million (A)	% Share of Mexico total	% Share of US total	US\$ Million (B)	% Share of Mexico total	% Share of US total	
07-Edible vegetables	835	31.2	62.7	1,721	31.3	57.3	886
22-Beverages	250	9.3	6.5	1,162	21.1	14.6	912
08-Edible fruit and nuts	389	14.5	14.3	833	15.1	18.3	444
09-Coffee, tea and spices	384	14.3	15.7	408	7.4	12.4	24
01-Live animals	362	13.5	30.4	333	6.1	17.3	-28
20-Preparations of vegetables and fruits	156	5.8	7.5	282	5.1	10.2	126
<i>Subtotal</i>	<i>2,376</i>	<i>88.7</i>	<i>--</i>	<i>4,740</i>	<i>86.1</i>	<i>--</i>	<i>2,363</i>
Remaining chapters	304	11.3	--	766	13.9	--	463
<i>Total</i>	<i>2,680</i>	<i>100.0</i>	<i>10.2</i>	<i>5,506</i>	<i>100.0</i>	<i>12.6</i>	<i>2,826</i>

Note: (1) NAFTA Article 708 definition of "agricultural good".

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

Going now to the structure of US agriculture products from Mercosur countries, we observe that US agricultural imports from Argentina increased from almost US\$ 500 million in 1989-1992 to US\$ 700 million in 1998-2001, a difference of US\$ 200 million (see Table 9). In spite of this increment in import value, the share of Argentina in US total agricultural imports decreased from 1.9% to 1.6%. In 1989-1992, *Preparations of vegetables and fruits* (HTS Chapter 20) and *Edible preparations of meat* (HTS Chapter 16) represented almost 58% of total, while in 1998-2001 the first six chapters accounted for almost the same share, with *Preparations of vegetables and fruits* (18.7%) and *Edible preparations of meat* (11.3%) being the top ones (Table 9). This fact indicates that US agricultural imports from Argentina diversified in the post-NAFTA years. This is also suggested by the values of the Kreinin and Finger Index (0.66) and the Spearman Correlation Coefficient (0.78), indicating that the composition of US agricultural imports from Argentina for years 1998-2001 is somehow different from that corresponding to years 1989-1992.

Regarding the change in participation within total US imports, we observe that Argentina lost a significant share in the US market in the case of *Edible preparation of meat*, going from 28% to 17%, while it gained participation in *Oilseeds* (from 0.8% to 5.1%) and *Cereals* (from 2% to 4.3%). On the other hand it remained a very modest supplier of *Fresh Meat* (1.1% in 1998-2001).

TABLE 9
UNITED STATES AGRICULTURAL IMPORTS FROM ARGENTINA (1)
COMPOSITION BY MAIN HTS CHAPTERS
 In current dollars CIF

HTS Chapter	Average 1989-1992			Average 1998-2001			Difference (B)-(A) US\$ million
	US\$ million (A)	% Share of Argentina ttl	% Share of US total	US\$ million (B)	% Share of Argentina ttl	% Share of US total	
20-Preparations of vegetables and fruits	119	23.8	5.7	132	18.7	4.8	14
16-Edible preparations of meat	174	34.8	28.4	80	11.3	17.2	-94
04-Dairy products	23	4.6	4.2	61	8.7	5.7	38
08-Edible fruit and nuts	19	3.8	0.7	61	8.6	1.3	42
12-Oil seeds and oleaginous fruits	4	0.8	0.8	45	6.3	5.1	40
17-Sugars and sugar confectionery	36	7.3	3.0	42	5.9	2.6	6
10-Cereals	9	1.7	2.0	41	5.8	4.3	32
22-Beverages	11	2.1	0.3	40	5.6	0.5	29
09-Coffee, tea and spices	21	4.3	0.9	37	5.2	1.1	16
Other agricultural goods	16	3.1	1.3	35	5.0	2.5	20
02-Meat	0	0.1	0.0	35	5.0	1.1	35
24-Tobacco	25	5.0	2.4	31	4.4	2.6	6
<i>Subtotal</i>	<i>456</i>	<i>91.4</i>	<i>--</i>	<i>640</i>	<i>90.5</i>	<i>--</i>	<i>184</i>
Remaining chapters	43	8.6	--	67	9.5	--	24
<i>Total</i>	<i>499</i>	<i>100.0</i>	<i>1.9</i>	<i>707</i>	<i>100.0</i>	<i>1.6</i>	<i>208</i>

Note: (1) NAFTA Article 708 definition of "agricultural good".

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

US agricultural imports from Brazil decreased from almost US\$ 1,500 million in 1989-1992 to almost US\$ 1,200 million in 1998-2001, a difference of US\$ 300 million, while the share of Brazil in US total agricultural imports decreasing from 5.8% to 2.9% (see Table 10). *Coffee, tea and spices* (HTS Chapter 09), *Preparations of vegetables and fruits* (HTS Chapter 20) and *Tobacco* (HTS Chapter 24) represented almost 60% of the total US imports in 1989-1992 and 55% in 1998-2001, while almost 90% of total US agricultural imports from Brazil were concentrated in seven HTS Chapters in both periods (Table 10). The fall of imports of *Preparations of vegetables and fruits* (US\$ 200 million) and of *Cocoa and its preparations* (US\$ 150 million) explain most of the fall of US agricultural imports from Brazil between 1989-1992 and 1998-2001 (Table 10). In this regard Brazil lost a significant participation in the total US imports of both products. For the case of *Preparations of vegetable and fruits* the share fell from 18.8% in 1989-1992 to 6.3% in 1998-2001, while in the case of *Cocoa* the share went from 16.9% to 2.4%.

TABLE 10
UNITED STATES AGRICULTURAL IMPORTS FROM BRAZIL (1)
COMPOSITION BY MAIN HTS CHAPTERS
 In current dollars CIF

HTS Chapter	Average 1989-1992			Average 1998-2001			Difference (B)-(A)
	US\$ million (A)	% Share of Brazil total	% Share of US total	US\$ million (B)	% Share of Brazil total	% Share of US total	US\$ million
09-Coffee, tea and spices	406	26.5	16.6	371	29.8	11.3	-35
20-Preparations of vegetables and fruits	392	25.6	18.8	174	14.0	6.3	-217
24-Tobacco	155	10.1	14.8	141	11.3	11.8	-15
08-Edible fruit and nuts	109	7.1	4.0	137	11.1	3.0	28
17-Sugars and sugar confectionery	108	7.0	9.0	125	10.1	7.6	18
16-Edible preparations of meat	35	2.3	5.7	107	8.6	22.9	72
18-Cocoa and its preparations	192	12.5	16.9	39	3.1	2.4	-154
Subtotal	1,397	91.2	--	1,094	88.0	--	-303
Remaining chapters	135	8.8	--	150	12.0	--	14
Total	1,532	100.0	5.8	1,244	100.0	2.9	-288

Note: (1) NAFTA Article 708 definition of "agricultural good".

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

US agricultural imports from Uruguay increased from almost US\$ 40 million in 1989-1992 to near US\$ 65 million in 1998-2001, with the share of Uruguay in US total agricultural imports remaining the same (0.1%) in both periods. In 1989-1992, five HTS Chapters accounted for almost 95% of total US agricultural imports from Uruguay: *Edible preparations of meat* and *other agricultural goods* representing jointly almost 60% of total. In period 1998-2001, *Meat* and *Dairy products* accounted for almost 80% of total US agricultural imports from Uruguay (Table 11). From the comparison in the change in the structure of imports of US from Uruguay, it is interesting to highlight the tremendous increase of *meat* exports that even surpassed that of Argentina. They went from US\$ 6 million in 1989-1992 to US\$ 41 million in 1998-2001. Still they represented just a 1.3% of total US imports of these products at the end of the considered period.

From the overall analysis of the data at 2-digit level of the HS system we can conclude that the indicated fall in Mercosur share in total US imports has been caused mainly by a significant increase of US imports of some agriculture products from its NAFTA partners. This is the case, for example, with *Meat* (US\$ 1,000 million raise in imports from Canada), *Edible Vegetables* (US\$ 850 million increase in imports from Mexico); *Preparation of Cereals and Flour* (US\$ 600 million raise from Canada), *Preparation of Vegetables and Fruit* (US\$ 400 million from Canada and US\$ 100 million from Mexico). To a lesser extent the fall in Mercosur participation has also been caused by a decline in the value of Mercosur's exports of some commodities. This has been particularly important in the case of Brazil with *Preparation of Vegetables and Fruit* where Brazilian exports fell more than US\$ 200 million and *Cocoa and its preparation* with a fall of about US\$ 150 million.

TABLE 11
UNITED STATES AGRICULTURAL IMPORTS FROM URUGUAY (1)
COMPOSITION BY MAIN HTS CHAPTERS
 In current dollars CIF

HTS Chapter	Average 1989-1992			Average 1998-2001			Difference (B)-(A)
	US\$ million (A)	% Share of Uruguay ttl	% Share of US total	US\$ million (B)	% Share of Uruguay ttl	% Share of US total	US\$ million
02-Meat	6	15.3	0.2	41	64.7	1.3	35
04-Dairy products	2	5.9	0.4	8	12.2	0.7	6
16-Edible preparations of meat	13	35.8	2.2	6	8.9	1.2	-8
17-Sugars and sugar confectionery	5	12.5	0.4	4	6.2	0.2	-1
Other agricultural goods	9	24.7	0.8	2	3.1	0.1	-7
Subtotal	35	94.3	--	61	95.3	--	25
Remaining chapters	2	5.7	--	3	4.7	--	1
<i>Total</i>	<i>37</i>	<i>100.0</i>	<i>0.1</i>	<i>64</i>	<i>100.0</i>	<i>0.1</i>	<i>26</i>

Note: (1) NAFTA Article 708 definition of "agricultural good".

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

How much of this change in the geographical composition of US imports can be attributed to a process of pure trade creation originated within NAFTA as a consequence of the fall of tariff barriers? To what extent does this change also reflect, at least in part, a process where trade flows have been diverted from Mercosur origins? We cannot give an appropriate answer to these questions by just looking at trade flow data. This is because along the considered period not only have trade barriers changed but also other determinants of import demand like income.

An important piece of information that is required to address this issue of trade creation vs. trade diversion is import prices. In a very simple partial equilibrium framework (see, for example, Grossman and Helpman [1995]), trade creation takes place when we observe a decline in import prices following the reduction in trade barriers (so total imports rise). An additional condition is that imports from third origins are zero after the change in tariffs. In this same framework, if after the reduction in domestic barriers, there are still imports from third country origins, then import prices would not fall (as a consequence of the FTA) and the reduction in trade barriers is associated with pure trade diversion. Moreover, if in this equilibrium we allow for imports to change (increase) due to an increase in national income, the additional imports will come from the rest of the world.

We did not pursue the price analysis so we are not able to apply the above framework to investigate whether trade diversion out of Mercosur countries has been important. The relevant theory predicts a fall in the import shares of Mercosur both if trade creation and trade diversion occurs. Still, as indicated, in the case of trade creation no imports from third markets are observed in equilibrium at the product level. The fact that this is not what has occurred suggests that for the case of some

products, like preparation of fruit and vegetables, meat and preparation of edible meat, Mercosur countries may have suffered a process of export losses due to trade diversion.²

Thus a process of trade liberalization of agriculture between Mercosur and US can revert some of these negative consequence of NAFTA and, moreover, it could give rise to additional gains from trade creation. But what products or sectors could be the ones that have the most to gain from this hypothetical FTA between US and Mercosur? To answer this question we have to look not only at existing Mercosur exports to the US (which could be affected by existing barriers in that market), but try to identify, using world market data, where the comparative advantages of these countries lie. We do this in the next chapter.

C. Mercosur Comparative Advantage in Agriculture Exports and their Access to the US Market

In this subsection we will investigate in more detail the agriculture products that Mercosur countries are more efficient at producing, working at a very disaggregate level. In particular, following Balassa [1967], we are going to calculate various indicators of revealed comparative advantages (IRCA) using 6-digit HS data on trade flows for years 1998-2000. The Balassa indicator takes the following form:

$$IRCA = \frac{\frac{x_{ij}}{X_j}}{\frac{X_i}{X}}$$

where x_{ij} are the exports of product j by country i , X_j are total exports of product j for the considered sample of countries, X_i are total exports of country i , while X are total exports for the considered sample of countries. The above index takes values between 0 (when a country does not export product j), and potentially large positive numbers (when, for example country i is the only world exporter of product j , but at the same time has a very tiny participation in total world exports). When the IRCA indicator has a value greater than one we say that country i has a revealed comparative advantage in product j relative to the considered sample of countries.

We will compute the IRCA indexes world-wide and also in terms of the US import market. The finding of large differences between the two indexes (for example, a product for which a given country is very competitive world-wide but not in the US) may suggest the presence of market access problems. Latter on, we will investigate whether this disparity between the two indicators can be associated to the presence of specific trade barriers.

Tables 12-14 present the result of the IRCA calculations for Argentina, Brazil and Uruguay, respectively. Each table is organized as a double-entry spreadsheet where in the horizontal direction we indicate the number of tariff lines and export volume corresponding to 6-digit agricultural

² Still we should recognize that at this level of aggregation (2-digit HS), the assumption of a perfectly homogenous good, which underlines the simple partial equilibrium framework used in the text, could not be satisfactory. In other words, imports coming from third countries could be of different variety and quality as those imported from FTA members.

products for which the IRCA-world is greater (first row) or lower than one (second row). On the vertical dimension we indicate the tariff lines and trade volume associated with the IRCA calculated for the US market, distinguishing again between those products where the indicator is greater than one (left) from those where the indicator is lower than one (right). There is a third column (and row) where we indicate the total number of tariffs and of exports.

Table 12 shows that Argentina has worldwide comparative advantages in 72 6-digit HS products, which represented an annual value of exports of US\$ 10,196 million during the 1998-2000 period. Notice that the IRCA indicator is a good predictor of Argentina's comparative advantages in agriculture. These 72 products represent only a 13% of the total of 569 agriculture tariff positions for which we observed positive exports during this period, but at the same time they capture a vast majority, 88%, of the total agriculture exports.

TABLE 12
INDICATORS OF REVEALED COMPARATIVE ADVANTAGE FOR ARGENTINA EXPORTS
TO THE WORLD AND TO THE UNITED STATES

IN US\$ MILLION									
	IRCA US - Greater or equal to 1			IRCA US - Less than 1			Total		
	Tariff Lines	Argentina Exports		Tariff Lines	Argentina Exports		Tariff Lines	Argentina Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	37	3,754	561	35	6,442	1.0	72	10,196	562
IRCA WORLD Less than 1	27	231	101	469	1,147	50.0	496	1,378	151
<i>Total</i>	64	3,985	662	504	7,589	51.0	568	11,574	713

IN % OF TOTAL									
	IRCA US - Greater or equal to 1			IRCA US - Less than 1			Total		
	Tariff Lines	Argentina Exports		Tariff Lines	Argentina Exports		Tariff Lines	Argentina Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	7	32	79	6	56	0.1	13	88	79
IRCA WORLD Less than 1	5	2	14	83	10	7.0	87	12	21
<i>Total</i>	11	34	93	89	66	7.0	100	100	100

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

Argentina has a revealed comparative advantage in the US market in 64 tariff lines, representing exports to US for about US\$ 662 million per year in 1998-2000 (93% of the total US exports). Now, as indicated above, we are interested in one particular intersection of these two comparative advantage indicators. This is where IRCA-world is higher than one and IRCA-US is less than 1. That is, we want to identify those products where Argentina has gained a significant presence worldwide, but this is not reflected in the US market. As we see, this occurs in 35 positions (6% of the total 6-digit HS products). Total exports to US of these products were only US\$ 1 million per year in 1998-2000, while they were around US\$ 6,442 million to the world. So it is clear that the low level of exports to US was not associated to export supply deficiencies. The possibility that this discrepancy can be explained by the presence of trade barriers is explored in the next subsection.

We may also be interested in highlighting another type of intersection between the two IRCA indexes. That in which Argentina is not world-wide efficient (IRCA world less than 1), but for some reasons it has gained significant access to the US market (IRCA-US greater than 1). As we see this case encompasses a total of 27 tariff positions with a value of exports to US of around US\$ 101 million (14% of total US exports), while world exports of these products have been US\$ 231 million (2% of total world exports). There could be many reasons explaining this other discrepancy between the two IRCA indexes, but one aspect that is relevant, from a perspective of trade policy, is the possible presence of the same type of preference Argentine products may enjoy entering the US market compared to other countries (for example, the Generalized System of Preferences applied by US to developing countries). The practical relevance of this issue will be also subject of analysis in the next subsection.

When we apply the same type of analysis to the case of Brazil (see Table 13) we find similar results to that of Argentina. That is, Brazil's world-wide comparative advantage in agriculture products is concentrated on few items (59 tariff lines, encompassing 10% of the 579 lines with positive exports in 1998-2000), which all together represented US\$ 12,665 million of average annual exports (90% of total world exports) in 1998-2000. On the other hand, Brazil has developed comparative advantages in the US market in 53 products, which represented 93% of the total exports to US (US\$ 1,216 million). Out of the 59 products for which IRCA-World is higher than 1, we see that 32 of them have not been successful in entering the US market (IRCA-US less than 1). This is clearly demonstrated by the fact that exports to US of these 32 item averaged only US\$ 8 million per year in 1998-2000, while export to the world of the same products reached US\$ 5,848 million per year during the same period.

TABLE 13
INDICATORS OF REVEALED COMPARATIVE ADVANTAGE FOR BRAZIL EXPORTS
TO THE WORLD AND TO THE US

IN US\$ MILLION									
	IRCA US - Greater or equal to 1			IRCA US - Less than 1			Total		
	Tariff Lines	Brazil Exports		Tariff Lines	Brazil Exports		Tariff Lines	Brazil Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	27	6,817	1,139	32	5,848	8	59	12,665	1,147
IRCA WORLD Less than 1	26	98	77	491	1,287	83	517	1,385	160
<i>Total</i>	53	6,915	1,216	523	7,135	91	576	14,050	1,307
IN % OF TOTAL									
	IRCA US - Greater or equal to 1			IRCA US - Less than 1			Total		
	Tariff Lines	Brazil Exports		Tariff Lines	Brazil Exports		Tariff Lines	Brazil Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	5	49	87	6	42	1	10	90	88
IRCA WORLD Less than 1	5	1	6	85	9	6	90	10	12
<i>Total</i>	9	49	93	91	51	7	100	100	100

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

The analysis for Uruguay is presented in Table 14. This country has 57 tariff lines (18%) for which IRCA-world is greater than one, encompassing US\$ 1,054 million of exports (93% of total agriculture exports). Out these 57 positions, 33 correspond to 6-digit products where the IRCA-US is lower than one. The apparent difficulty that Uruguay has faced in selling these goods in US is reflected in the fact that exports through these positions have been only US\$ 0.1 million per year in 1998-2000, while at the rest of the world Uruguay has exported around US\$ 584 million through the same tariff lines.

TABLE 14
INDICATORS OF REVEALED COMPARATIVE ADVANTAGE FOR URUGUAY EXPORTS
TO THE WORLD AND TO THE UNITED STATES

IN US\$ MILLION									
	IRCA US - Greater or equal to 1			IRCA US - Less than 1			Total		
	Tariff Lines	Uruguay Exports		Tariff Lines	Uruguay Exports		Tariff Lines	Uruguay Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	24	470	56	33	584	0.1	57	1,054	56
IRCA WORLD Less than 1	14	8	6	242	72	1.0	256	80	7
<i>Total</i>	38	478	62	275	656	1.0	313	1,134	63

IN % OF TOTAL									
	IRCA US - Greater or equal to 1			IRCA US - Less than 1			Total		
	Tariff Lines	Uruguay Exports		Tariff Lines	Uruguay Exports		Tariff Lines	Uruguay Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	8	41	89	11	51	0.2	18	93	89
IRCA WORLD Less than 1	4	1	10	77	6	2.0	82	7	11
<i>Total</i>	12	42	98	88	58	2.0	100	100	100

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

Finally, it could be interesting to do the same analysis for Canada and Mexico. We would expect that, given these countries' preferential access to the US market, the comparative advantage indicators to the world and US would not differ much. This is precisely what is suggested by the information presented in Tables 15 and 16. For example, for the case of Canada, out of the 154 tariff lines where IRCA world is higher than one, for only 18 (12%) the comparative advantage indicator for US is below 1. We can also investigate whether we have many items where even though Canada is not world-wide efficient (IRCA world less than one), the preferences obtained in the US market (including transport cost savings) has facilitated the introduction of these goods. In this regard Table 15 shows that out of the 277 products where IRCA-US is higher than 1, in approximately 50% of them the IRCA world is less than one. Nevertheless, notice that through these positions goes a small proportion of exports to US (10%), the rest corresponds to products that Canada has also reached world-wide comparative advantages.

TABLE 15
INDICATORS OF REVEALED COMPARATIVE ADVANTAGE FOR CANADA EXPORTS TO THE WORLD AND TO THE US

IN US\$ MILLION									
	IRCA-US - Greater or equal to 1			IRCA-US - Less than 1			Total		
	Tariff Lines	Canada Exports		Tariff Lines	Canada Exports		Tariff Lines	Canada Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	136	12,339	7,025	18	684	573	154	13,023	7,598
IRCA WORLD Less than 1	141	1,360	898	343	877	454	484	2,237	1,352
<i>Total</i>	277	13,699	7,923	361	1,561	1,027	638	15,260	8,950

IN % OF TOTAL									
	IRCA-US - Greater or equal tot 1			IRCA-US - Less than 1			Total		
	Tariff Lines	Canada Exports		Tariff Lines	Canada Exports		Tariff Lines	Canada Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	21	81	78	3	4	6	24	85	85
IRCA WORLD Less than 1	22	9	10	54	6	5	76	15	15
<i>Total</i>	43	90	89	57	10	11	100	100	100

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

TABLE 16
INDICATORS OF REVEALED COMPARATIVE ADVANTAGE FOR MEXICO EXPORTS TO THE WORLD AND TO THE UNITED STATES

IN US\$ MILLION									
	IRCA US - Greater or equal to 1			IRCA US - Less than 1			Total		
	Tariff Lines	Mexico Exports		Tariff Lines	Mexico Exports		Tariff Lines	Mexico Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	78	5,627	4,634	41	619	105	119	6,246	4,739
IRCA WORLD Less than 1	43	140	276	432	810	375	475	950	651
<i>Total</i>	121	5,767	4,910	473	1,429	480	594	7,196	5,390

IN % OF TOTAL									
	IRCA US - Greater or equal to 1			IRCA US - Less than 1			Total		
	Tariff Lines	Mexico Exports		Tariff Lines	Mexico Exports		Tariff Lines	Mexico Exports	
		To World	To US		To World	To US		To World	To US
IRCA WORLD Greater or equal to 1	13	78	86	7	9	2	20	87	88
IRCA WORLD Less than 1	7	2	5	73	11	7	80	13	12
<i>Total</i>	20	80	91	80	20	9	100	100	100

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

What are the agriculture products in which Mercosur countries have developed comparative advantages? This information is presented in Tables 17-19. Table 17 shows the data for Argentina. Out of the 72 products for which we found this country has a world-wide comparative advantage, the table lists those for which world exports have been higher than US\$ 10 million per year in 1998-2000. Besides exports to world markets, the table also shows the value of exports to US and the corresponding levels of the IRCA indexes. Within these 49 items, we have highlighted (in italics and bold) those products that have an IRCA-US index less than one and also (in bold) those where IRCA world is higher than that of IRCA-US, though this latter is also higher than one (reflecting a relative larger insertion in world markets compared to US).

TABLE 17
ARGENTINA EXPORTS OF AGRICULTURAL PRODUCTS WITH IRCA WORLD GREATER OR
EQUAL TO 1 - ORDERED DECREASINGLY BY IRCA WORLD
 Products where exports to the world are greater or equal to US\$ 10 million

Nº	HTS 6 digits	Description	Argentina Exports (US\$ million)		IRCA		IRCA WORLD as % IRCA US
			To World	To US	World	US	
1	230630	<i>Oilcake and other solid residues, resulting from the extraction of vegetable fats or oils, of sunflower seeds.</i>	137	0	18.7	0.0	--
2	151211	Sunflower-seed or safflower oil, crude, and their fractions, whether or not refined, not chemically modified.	710	1	18.5	2.5	634.4
3	150710	<i>Crude soybean oil, whether or not degummed.</i>	1,185	0	14.8	0.0	--
4	150810	Crude peanut (ground-nut) oil.	56	14	14.4	46.0	-68.8
5	090300	Mate.	25	1	13.5	39.1	-65.4
6	330113	Essential oils of lemon.	41	21	11.4	32.5	-64.9
7	230400	<i>Oilcake and other solid residues, resulting from the extraction of soybean oil.</i>	1,904	0	9.7	0.0	--
8	071333	<i>Seeds of kidney beans and dried kidney beans.</i>	150	0	9.1	0.0	--
9	120220	Peanuts (ground-nuts), not roasted or cooked, shelled.	172	32	8.6	46.3	-81.4
10	040900	Natural honey.	91	43	6.9	27.3	-74.7
11	070320	Garlic, fresh or chilled.	89	14	6.8	18.9	-64.2
12	160250	Prepared or preserved meat of bovine animals (including corned beef).	181	82	6.1	20.8	-70.6
13	151219	<i>Sunflower seed or safflower oil, other than crude, and their fractions, whether or not refined, but not chemically modified.</i>	135	0.01	6.0	0.3	2,172.4
14	080820	Pears and quinces, fresh.	171	38	5.9	25.4	-76.9
15	020500	<i>Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.</i>	58	0	5.6	0.0	--
16	120600	<i>Sunflower seeds, whether or not broken.</i>	142	1	5.2	3.8	36.6
17	200930	Citrus juice of any single citrus fruit.	29	9	4.8	25.7	-81.2
18	151229	Cottonseed oil, other than crude, and its fractions, whether or not refined, but not chemically modified.	12	5	4.6	50.3	-90.8
19	200960	Grape juice (including grape must), concentrated or not concentrated.	49	39	4.2	30.5	-86.4
20	100590	<i>Corn (maize) and yellow dent corn.</i>	1,016	0.02	4.1	0.03	12,839.6
21	230890	Vegetable materials and vegetable waste, vegetable residues and by products, of a kind used in animal feeding.	32	1	4.0	6.0	-33.2
22	020810	<i>Meat and edible meat offal of rabbits or hares, fresh, chilled or frozen.</i>	19	0	4.0	0.0	--
23	080530	<i>Lemons and limes, fresh or dried.</i>	86	2	3.8	1.9	101.5
24	100700	Grain sorghum.	73	0.1	3.4	30.4	-88.8
25	100610	<i>Rice in the husk (paddy or rough).</i>	37	0	3.3	0.0	--
26	200570	<i>Olives, prepared or preserved.</i>	53	0.2	3.2	0.1	6,137.8

TABLE 17 (cont.)

Nº	HTS 6 digits	Description	Argentina Exports (US\$ million)		IRCA		IRCA WORLD as % IRCA US
			To World	To US	World	US	
27	100190	<i>Seed of wheat and meslin and wheat and meslin.</i>	1,170	0	3.0	0.0	--
28	120100	Soybeans, whether or not broken.	646	8	2.5	10.3	-76.0
29	200811	Blanched peanuts and peanuts, otherwise prepared or preserved.	30	8	2.3	11.2	-79.5
30	040221	<i>Milk & cream, concentrate not sweetened, in powder, granules or other solid forms.</i>	210	0.04	2.2	0.2	825.9
31	020130	Bovine meat cuts, boneless, fresh or chilled.	335	13	2.2	1.1	108.7
32	200970	Apple juice, concentrated or not concentrated.	60	62	2.1	13.8	-85.0
33	100510	Seed corn (maize).	43	47	2.0	18.6	-89.3
34	081320	Prunes and plums, dried.	14	0.3	1.9	18.5	-89.6
35	151790	<i>Edible artificial mixtures of products provided for in headings 1501 to 1515.</i>	38	0.01	1.9	0.1	1,667.7
36	070310	<i>Onion sets, fresh or chilled.</i>	45	0.5	1.6	0.2	772.7
37	110100	<i>Wheat or meslin flour.</i>	78	0.005	1.6	0.01	25,850.1
38	110710	<i>Malt, not roasted.</i>	59	0	1.5	0.0	--
39	150990	<i>Olive oil, other than virgin olive oil, and its fractions, not chemically modified.</i>	21	0.3	1.4	0.1	1,387.6
40	080940	<i>Plums, prunes and sloes, fresh.</i>	12	0.2	1.3	0.3	283.1
41	150790	<i>Soybean oil, other than crude, and its fractions, whether or not refined, but not chemically modified.</i>	40	0.01	1.3	0.02	7,498.8
42	240120	Tobacco, partly or wholly stemmed (stripped).	123	26	1.2	4.4	-71.8
43	080810	Apples, fresh.	90	2	1.2	1.0	15.3
44	090240	Black tea (fermented) and partly fermented tea, other than in immediate packings of a content not exceeding 3 kg.	44	35	1.2	16.1	-92.7
45	020230	Bovine meat cuts, boneless, frozen.	161	28	1.2	1.5	-19.7
46	520100	Cotton, not carded or combed.	151	3.1	1.2	2.9	-60.3
47	350300	Gelatin sheets and derivatives and glues of animal origin.	26	8	1.1	3.6	-69.8
48	220710	Denatured ethyl alcohol of 80 percent vol. alcohol or higher.	23	8	1.1	3.1	-64.6
49	020629	Edible offal of bovine animals, except tongues or livers, frozen.	16	1	1.0	1.5	-32.9
TOTAL			10,088	553			

Notes: Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

As we see, Argentina has developed strong world-wide comparative advantages in the production and exports of various oils (and their solid residuals) produced out of sunflower-seed, soybean-seed and peanuts. Of course, the direct exportation of the seeds out of which these oils are produced has also been important but in general we observe a lower level of the comparative advantage indicator for the unprocessed input. Other products for which Argentina has a significant world-wide comparative advantage and where the volume of exports is very significant are corn and wheat. With low level of world exports but still with large values for the IRCA index we have citrus juice, grape juice and apple juice as well as apples and lemons and olives. Finally, with a less significant comparative advantage parameter (but still greater than 1), we find powder milk and fresh and frozen bovine meat cuts.

Within the products where Argentina is world-wide efficient but has not been relatively efficient at penetrating the US market, we have to highlight, for their sharp contrast between world market exports and those going to US, the cases of crude oil soybean (US\$ 1,185 million to world and zero to US), solid residuals from extraction of soybean oil (US\$ 1,904 million and zero), corn (US\$ 1,000 million to almost zero) and wheat (US\$ 1,170 million and zero). Though in the next chapter we will investigate in detail the presence of trade barriers for these products, it is clear that such contrast between world-wide export supply and US import from Argentina is largely explained by the fact that US is also a major producer and exporter of these goods. Thus, US imports of these goods are very low or zero from most countries.

This is not the case of other agriculture items like olives and olive oil, powder milk, fresh bovine meat, onions sets, wool, malt, fresh plums and prunes. These products represent items were Argentina, being world-wide efficient, have met difficulties in accessing the US market. We have few other products where though the IRCA-US is close or even larger than one, the difference with the IRCA world is very significant suggesting that Argentina could potentially have a much significant presence in the US market. These are the cases of Sunflower-seeds and Sunflower oil.

Table 18 shows the list of products in which Brazil has developed world-wide comparative advantage and for which there were exports to world markets equal or greater than US\$ 10 million per year in 1998-2000. These are 37 products out of the 59 for which we have found that IRCA world was higher than 1. As we did for the case of Argentina, we have highlighted in italics and bold those items where the IRCA-US was lower than one, suggesting problems in accessing the US market and in black those where IRCA world is higher than that of IRCA-US, though this latter is also higher than one.

TABLE 18
BRAZIL EXPORTS OF AGRICULTURAL PRODUCTS WITH IRCA WORLD
GREATER OR EQUAL TO 1 ORDERED DECREASINGLY BY IRCA WORLD
 Products where exports to the world are greater or equal US\$ 10 million

Nº	HTS 6 digits	Description	Brazil Exports (US\$ million)		IRCA		IRCA WORLD as % IRCA US
			To World	To US	World	US	
1	080121	Brazil nuts, fresh or dried, in shell.	11	6.00	17.8	31.0	-42.8
2	152110	Vegetable waxes (other than triglycerides), whether or not refined or colored.	40	13.00	17.1	24.7	-30.5
3	200911	Orange juice, frozen, unfermented and not containing added spirit.	1,172	154.00	14.8	19.5	-24.0
4	090300	Mate.	31	0.10	13.7	2.6	430.4
5	170111	Cane sugar, raw, in solid form.	1,006	78.00	10.5	4.0	162.6
6	<i>020712</i>	<i>Chickens, not cut in pieces, frozen.</i>	388	0.00	10.4	0.0	--
7	160250	Prepared or preserved meat of bovine animals (inc. corned beef).	289	109.00	8.1	15.6	-48.0
8	080132	Cashew nuts, fresh or dried, shelled.	150	105.00	7.7	8.5	-10.1
9	090111	Coffee, not roasted, not decaffeinated.	2,040	372.00	7.2	4.8	49.9
10	<i>230400</i>	<i>Oilcake and other solid residues, resulting from the extraction of soybean oil.</i>	1,635	0.00	6.9	0.0	--
11	240120	Tobacco, partly or wholly stemmed (stripped).	776	125.00	6.4	11.6	-44.8
12	330112	Essential oils of orange.	17	13.80	6.4	22.3	-71.2
13	120100	Soybeans, whether or not broken.	1,986	0.20	6.3	0.2	3,413.7

TABLE 18 (cont.)

Nº	HTS 6 digits	Description	Brazil Exports (US\$ million)		IRCA		IRCA WORLD as % IRCA US
			To World	To US	World	US	
14	240130	Tobacco refuse.	37	7.00	6.0	9.7	-38.5
15	150710	Crude soybean oil, whether or not degummed.	528	0.00	5.4	0.0	--
16	200891	Palm hearts, otherwise prepared or preserved.	14	4.00	5.2	14.4	-63.8
17	080720	Papayas (papaws), fresh.	14	4.00	4.4	2.9	50.9
18	210111	Unflavored instant coffee and extracts, essences and concentrates of coffee.	238	40.70	4.3	7.2	-39.5
19	230890	Vegetable materials and vegetable waste, vegetable residues and by products, of a kind used in animal feeding.	39	0.00	4.0	0.0	--
20	170199	Cane/beet sugar & pure sucrose, refined, solid, w/o added coloring or flavoring.	677	1.00	3.8	1.1	258.7
21	020714	Cuts and offal of chickens, frozen.	416	0.00	3.2	0.0	--
22	090411	Pepper of the genus Piper, neither crushed nor ground.	78	33.00	2.6	4.4	-40.0
23	330190	Concentrates of essential oils; terpenic by-product of the deterpenation of essential oils; aqueous distillates & solutions of essential oils.	14	1.00	2.6	0.7	294.2
24	150790	Soybean oil, other than crude, and its fractions, whether or not refined, but not chemically modified.	97	0.01	2.6	0.02	15,781.6
25	080450	Guavas, mangoes, and mangosteens, fresh and dried.	33	14.00	2.5	2.8	-11.1
26	020727	Cuts and offal of turkeys, frozen.	49	0.00	2.4	0.0	--
27	120929	Seeds of forage plants of a kind used for sowing.	12	0.03	2.0	0.1	3,269.9
28	350300	Gelatin sheets and derivatives and glues of animal origin.	55	18.00	2.0	4.8	-58.9
29	220710	Denatured ethyl alcohol of 80 percent vol. alcohol or higher.	45	3.00	1.8	0.6	199.7
30	020230	Bovine meat cuts, boneless, frozen.	293	0.00	1.8	0.0	--
31	180400	Cocoa butter, fat and oil.	78	22.48	1.7	3.0	-44.0
32	020500	Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.	20	0.00	1.6	0.0	--
33	180310	Cocoa paste, not defatted.	18	2.00	1.5	1.9	-20.4
34	170410	Chewing gum, not containing cocoa, whether or not sugar-coated.	27	2.00	1.2	0.5	132.5
35	240110	Tobacco, not stemmed or stripped, not or not over 35% wrapper tobacco, not flue-cured burley.	69	0.20	1.1	0.01	8,404.9
36	080719	Melons, fresh.	27	0.10	1.1	0.01	9,970.5
37	020329	Frozen meat of swine.	134	0.00	1.0	0.0	--
TOTAL			12,554	1,129			

Notes: Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

As we see Brazil has developed strong comparative advantages, which have rendered significant values of world exports, in products like Orange juice (US\$ 1,172 million of world exports), raw and refined cane sugar (US\$ 1,600 million), Frozen Chickens cut and uncut (US\$ 800 million), Coffee (US\$ 2,000 million), Soybean (US\$ 1,986 million), Crude Soybean oil and their residuals (US\$ 2,100 million).

Within the products that Brazil has world-wide comparative advantages and have not been successful in penetrating the US markets, we find, as in the case of Argentina, large disparities in products where US is also one of the top world exporters. This is the case with Soybean seeds and Soybean oils and its residuals. Other products where Brazil faced strong difficulties to penetrate the US market and there is no presumption that US is a significant world-wide net exporter are Raw and Refine Cane Sugar, Frozen Chicken (cut and uncut), Frozen Bovine Meat Cuts, Tobacco, Cuts of Turkey, Melons and Papayas. With regard to Orange Juice though Brazil has been relatively successful in exporting to the US (the IRCA-US is greater than 1), the significant difference between exports to US and those to world markets (almost 10 times higher) may imply that greater participation in US is still possible.

Table 19 describes the list of products for which Uruguay has developed world-wide comparative advantages and where exports have been at least US\$ 1 million per year during 1999-2001. These are 45 items out of the original 57 positions. We see that Uruguay has met difficulties to enter the US market in some of its key agriculture commodities (*italics and bold*). This is the case of, for example, Rice Products (US\$ 204 million of export to the world and zero to US), Milk and Cream products (US\$ 85 million and zero); Bovine meat cuts fresh and frozen (US\$ 254 million and US\$ 27 million); Mandarins, Oranges and Lemons (US\$ 46 million and zero).

TABLE 19
URUGUAY EXPORTS OF AGRICULTURAL PRODUCTS WITH IRCA WORLD
GREATER OR EQUAL TO 1 - ORDERED DECREASINGLY BY IRCA WORLD
 Products where exports to the world are greater or equal to US\$ 1 million

Nº	HTS 6 digits	Description	Uruguay Exports (US\$ Million)		IRCA		IRCA WORLD as % IRCA US
			To World	To US	World	US	
1	020441	<i>Carcasses and half-carcasses of sheep, other than lamb, frozen.</i>	5	0.000	31.8	0.00	--
2	510129	Wool, degreased, not shorn, not carded or combed.	7	0.100	26.1	9.10	187.7
3	100620	Husked rice.	42	0.000	20.2	0.00	--
4	510310	Wool, carbonized, not carded or combed.	4	1.000	16.7	94.40	-82.3
5	100610	<i>Rice in the husk (paddy or rough).</i>	20	0.000	13.9	0.00	--
6	020423	<i>Boneless meat of sheep, fresh or chilled.</i>	5	0.000	12.1	0.00	--
7	020230	Bovine meat cuts, boneless, frozen.	211	27.000	11.9	11.50	3.6
8	051000	<i>Cantharides; bile; glands and other animal products used in pharmaceutical products.</i>	3	0.000	9.6	0.00	--
9	100640	Broken rice.	8	0.000	9.1	0.00	--
10	110710	Malt, not roasted.	46	0.000	8.9	0.00	--
11	100630	<i>Rice semi-milled or wholly milled, whether or not polished or glazed.</i>	142	0.005	8.6	0.01	68,272.6
12	020421	<i>Carcasses and half-carcasses of sheep, other than lamb, fresh or chilled.</i>	2	0.000	7.9	0.00	--
13	020500	<i>Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.</i>	10	0.000	7.7	0.00	--
14	020443	Boneless meat of sheep, frozen.	7	0.030	5.8	1.40	331.2
15	010410	Live sheep.	10	0.000	5.8	0.00	--
16	021020	Meat of bovine animals, salted, in brine, dried or smoked.	1	1.000	5.7	182.20	-96.9
17	020621	Tongues of bovine animals, frozen.	5	0.200	5.4	20.10	-72.9

TABLE 19 (cont.)

Nº	HTS 6 digits	Description	Uruguay Exports (US\$ million)		IRCA		IRCA WORLD as % IRCA US
			To World	To US	World	US	
18	160250	Prepared or preserved meat of bovine animals (inc. corned beef).	20	5.000	5.4	10.00	-46.0
19	150590	<i>Fatty substances derived from wool grease (including lanolin).</i>	1	0.020	5.1	0.50	828.4
20	020220	Bovine meat cuts, w/bone in, frozen.	10	0.050	4.9	5.70	-14.8
21	020130	Bovine meat cuts, boneless, fresh or child.	91	13.000	4.7	9.20	-49.1
22	020629	Edible offal of bovine animals, except tongues or livers, frozen.	9	2.000	4.6	27.40	-83.4
23	020430	Carcasses and half-carcasses of lamb, frozen.	1	0.020	4.4	6.10	-28.0
24	020120	<i>Bovine meat cuts, with bone in, fresh or chilled.</i>	43	0.000	4.4	0.00	--
25	040120	<i>Milk and cream, not concentrated, unsweetened, fat content over 1% but n/o 6%.</i>	31	0.000	4.2	0.00	--
26	040900	<i>Natural honey.</i>	7	0.100	4.1	0.60	642.2
27	120929	Seeds of forage plants of a kind used for sowing.	3	0.200	4.1	6.70	-39.0
28	020442	Cuts of sheep meat with bone in, frozen.	10	1.000	4.0	5.20	-22.9
29	120600	<i>Sunflower seeds, whether or not broken.</i>	14	0.000	3.9	0.00	--
30	080520	<i>Mandarins (including tangerines and satsumas); clementines, wilkings and similar citrus hybrids, fresh or dried.</i>	18	0.000	3.5	0.00	--
31	080510	<i>Oranges, fresh or dried.</i>	22	0.000	3.4	0.00	--
32	150200	<i>Fats of bovine animals, sheep or goats.</i>	10	0.000	3.2	0.00	--
33	050400	Guts, bladders and stomachs of animals (other than fish), whole and pieces thereof.	15	1.000	2.8	5.40	-48.2
34	040210	<i>Milk and cream, concentrated or sweetened, in powder, granules or other solid forms.</i>	27	0.000	2.6	0.00	--
35	040110	<i>Milk and cream, not concentrated, with no added sweeteners, fat content, by weight, not more than 1 percent.</i>	3	0.000	2.5	0.00	--
36	330113	Essential oils of lemon.	1	0.100	2.4	1.30	87.7
37	200930	Citrus juice of any single citrus fruit.	2	0.100	2.3	2.30	2.0
38	040221	<i>Milk & cream, concentrate, not sweetened, in powder, granules or other solid forms.</i>	27	0.000	2.2	0.00	--
39	080530	<i>Lemons and limes, fresh or dried.</i>	6	0.000	1.9	0.00	--
40	040510	Butter.	16	0.500	1.9	10.20	-81.8
41	510111	Wool, greasy, shorn, not carded or combed.	9	0.400	1.8	3.20	-45.6
42	040690	Cheeses and substitutes for cheese.	41	3.000	1.4	2.50	-42.8
43	040620	Cheeses, grated or powdered.	2	0.200	1.4	11.90	-88.2
44	010290	<i>Live bovine animals other than purebred or those imported for dairy purposes.</i>	21	0.000	1.4	0.00	--
45	240220	<i>Cigarettes containing tobacco.</i>	57	0.000	1.1	0.00	--
TOTAL			1,048	56.000			

Notes: Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information obtained from USITC TRADE DATAWEB.

In the case of other dairy goods like Butter and Cheeses, Uruguay has developed a strong export performance in world markets (US\$ 59 million of exports), which is much less reflected in the US (US\$ 4 million of exports). Still the IRCA-US indicator is higher than one because, as we will see below, of the strong inward orientation of this sector in the US economy.

The use of the Balassa indicators has helped us to identify where the comparative advantages of Mercosur countries lay in terms of agriculture products. It has also helped to single out those products for which world-wide efficiency was not reflected in the US market. The next step is to study whether these discrepancies are or not associated to the presence of tariff and non-tariff barriers. We do this in the next subsection.

D. Tariff and Non-Tariff Trade Barriers Affecting Mercosur Agriculture Exports in US

In what follows we present a detailed analysis of the various tariff and non-tariff barriers affecting Mercosur key agriculture exports in the US. Though we still keep our product aggregation assumption at the 6-digit level of the HS system, in each case we will indicate the number of 8-digit positions that are affected by a given measure. For each country we present two tables: one with a description of tariff barriers and a second with the detail of non-tariff measures. The information on tariffs and non-tariff barriers was obtained from the US HTS, from CNCE [1999] and from Funcex [2000].

In the tables corresponding to tariff measures (see Tables 20, 22 and 24) we present three different tariff indicators. First, an estimation of the implicit average tariff corresponding to the 6-digit agriculture aggregate. This is obtained by dividing the amount of duties collected over imports from each country at the 6-digit commodity definition. This is a rather rough measure of average tariff protection; still we decided to include it because it provides a first estimation of the equivalent *ad valorem* protection in case of products that are subject to specific duties. Of course, as we will see below, this indicator is not very informative in cases where there are no imports and also it will tend to underestimate the average protection of a determinate 6-digit aggregate when, as a consequence of high specific tariffs, some of its 8-digit products are not imported.

In the tariff tables we also report the actual *ad valorem* tariff applied to each product indicating the minimum and maximum duties within the corresponding eight digit items. Finally, we indicate the number of 8-digit lines subject to specific duties, showing also the minimum and maximum values. In this case, though, a higher absolute value of the specific tariff is no indicative of a higher rate of protection; to evaluate this we have to have information on the product price. Below we present *ad valorem* equivalencies for specific duties applied to some 8-digit items.

The information about non-tariff barriers (see Tables 21, 23 and 25) is organized following the OECD methodology for the classification and measurement of NTBs (see OECD [1999]). Thus, in the Tables we only describe the "Core NTBs" defined as those affecting imports quantities and prices directly. These are: non-automatic import licenses, tariff rate quotas, seasonal tariffs, special agriculture safeguard actions (introduced within the Agriculture Agreement of the UR) and antidumping and compensatory measures. In each case we present the number of 8-digit items

affected by these restrictions. One additional restriction affecting agriculture commodities, which we may be letting aside, is that of phytosanitary standards. Yet we have to bear in mind that these requirements are many times implemented through non automatic licenses, so the extent to which this is an important restriction will be partially captured by the coverage of this licensing measure.

Starting with the tariff structure applied to Argentina's exports (see Table 20) we observe that most of the six-digit aggregates include 8-digit items that are subject to specific tariffs. This makes less transparent the degree of protection applied to the involved products and, perhaps more important, raises the implicit rate of protection in times of low international prices. Overall, the implicit average tariff calculations seem to suggest that at the six-digit level, the degree of protection faced by Argentine products are not significantly high, with the possible exception of Citrus Juice where the implicit duty is 37.7%. Still this conclusion is not entirely confirmed when we analyze tariffs encountered at a more disaggregated level. For example, in the case of Bovine Meats Cuts, Boneless, Fresh or Chilled, a product that Argentina has faced difficulties to sell in the US market, there are 5 items that are subject to ad valorem tariff, some of which are as high as 26.4%. The two other 8-digit products are subject to specific tariff of US\$ 0.044 per kilo; these are not very high tariffs when evaluated at current prices (implying an ad valorem tariff of 0.6% and 1.4%). Still, when we look at the non-tariff barriers applied to these items we find that all positions are subject to Non-Automatic Import License (originated in sanitary restrictions), three are affected by Tariff Quotas and one is subject to a Special Agriculture Safeguard Provision.

Another example is Powder Milk. This is also a product that is very high in the list of Argentine priorities in the US market. The implied average tariff seems to suggest a very small level of protection (1.9%). Nevertheless, this is a result of a "noisy" estimation given the very low level of US imports (just US\$ 40,000). As we see, all 8-digit products here are subject to specific tariffs varying from US\$ 3 cents to US\$ 1.56 per kilo. We have calculated that for some positions (i.e. 04022125) these tariffs are as high as 49.1%. These products face in addition Non-Automatic Import Licenses (6 out of 9), Tariff Quotas (3 items) and Special Agriculture Safeguard Provisions (3 items).

If high protection both by tariff and especially non tariff barriers is an indication of a US import sensitive product, within the ones that are important for Argentina, we have, beyond the two indicated above, the case of Peanuts. This is a product that in principle Argentina has been able to introduce in the US market (exports to US were US\$ 40 million per year in 1998-2000 while they were US\$ 200 million to the world), but this was thanks to a quota system that allowed to export certain quantities at a specific tariff of US\$ 0.066 cents per kilo. As we see in Table 20 the tariff applied for import outside these quota quantities could be as high as 131%. Besides tariff rate quotas, imports of Peanuts are subject to special safeguard provisions. Honey is another product that Argentine producers have been able to successfully introduce in the US market but recently it has have faced antidumping and compensatory actions from the US Government.

The difficulty of Argentine Olive producers to enter the US market seems not to be associated to high specific tariffs (their implied *ad valorem* rates varies between 0.5% and 1.2%), but to the presence of licensing requirements (affecting almost all 8-digit items) and tariff rate quotas (applied to 25% of the tariff lines). Lemons, Onions Sets and Plums face specific tariffs that vary between 3% for lemons, and 1% and 5% for onions, and also non-automatic license requirements. This is not the case of Apples that face zero tariffs and the only impediment to export to the US market is licensing.

Finally, as suspected, grains like Corn, Sunflower and Soybeans, as well as oil and other products made out of Soybeans, face very low border protection in US. Thus the apparent difficulties of Argentine exporters are due to the fact that, as indicated, US is a major producer and exporter of these products.

Going to the case of Brazil (see Tables 22 and 23), in addition to Bovine Meat, which faces the same barriers as Argentina, Frozen Cuts of Chickens and Turkey have also met market access problems. Brazil is a key world exporter of these products and has not been able to sell a single ton in the US. The difficulty seems to be associated with specific duties (which tariff equivalent rates could be as high as 23%) and also the presence of licensing requirements, originated in sanitary standards.³ A second key product for Brazilian exporters to face severe restrictions is Sugar. Imports of Sugar are subject to very high specific tariffs for which *ad valorem* equivalent rates reach up to 118% (i.e position 17011150). Sugar is also subject to tariff rate quotas, where the high tariff indicated above is applied for off-quota quantities. Thus, exports outside the established limit are practically prohibited.

Brazil Orange juice producers have been able to enter the US markets even though on average they have paid high duties. As shown in Table 22 the implicit average tariff has been around 43% (taking the average product price of 1998-2000), this value being the tariff equivalence of a specific duty of about US\$ 0.079 per liter. No other restriction beyond licensing affects imports of this product.

Tobacco products also face high tariffs and non-tariff restrictions affecting Brazilian exports. For example, for some 8-digit tariff lines the tariff reaches 350%. This is combined with the establishment of tariff rate quotas. On the other hand, Fresh Melons are subject to high tariffs (for some products they reach 29.8%) and licensing requirements.

Among the products in which Brazil is a key world exporter and faces very low border barriers within US, we have Soybeans and Seeds of Forage Plants. This list also includes Soybean Oil, which is subject to an *ad valorem* tariff rate of 19%. Brazil difficulties to enter into the US market in these cases (as it also happens with Argentina) are then associated to US strong production and export position in these products.

In the case of Uruguay (see Tables 24 and 25) we also find that the presence of tariff and non-tariff barriers in the US market explains in part the difficulties of market access of products in which Uruguay is world-wide efficient. This is the case of Bovine Meat Cuts and Milk Powder, products that face the same barriers as those faced by Argentina's exports. There are other dairy items that Uruguay has been able to export world-wide like Butter and Cheeses and which face very strong tariff and non-tariff barriers in US. In the case of Butter the implicit average tariff calculation suggests that on average Uruguay exports pay a duty of around 46% (see Table 24). Cheeses pay specific tariffs that are equivalent to rates going from 38% to 67%. In addition, these dairy items are subject to import licensing, tariff rate quotas and special agriculture safeguard provisions.

³ The US has required that Brazil exports of chicken be free of the "New Castle Disease".

TABLE 20
TARIFF STRUCTURE OF ARGENTINA EXPORTS OF AGRICULTURAL PRODUCTS WITH IRCA WORLD GREATER OR EQUAL TO 1
 Products where exports to the world are greater or equal to US\$ 10 million

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Avg. Tariff (1)	Ad Valorem Tariff				Specific Tariff			
						Nº 8 digit	% Total 8 digit	Min.	Max.	Nº 8 digit	% Total 8 digit	Min. US\$/kg.	Max. US\$/kg.
1	020130	Bovine meat cuts, boneless, fresh or chilled.	7	13.000	1.5	5	71	4.0	26.4	2	29	US\$ 0.044/kg.	US\$ 0.044/kg.
2	020230	Bovine meat cuts, boneless, frozen.	7	28.000	6.8	5	71	4.0	26.4	2	29	US\$ 0.044/kg.	US\$ 0.044/kg.
3	020500	<i>Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.</i>	1	0.000	NI	1	100	0.0	0.0	0	0	--	--
4	020629	Edible offal of bovine animals, except tongues or livers, frozen.	1	1.000	0.0	1	100	0.0	0.0	0	0	--	--
5	020810	<i>Meat and edible meat offal of rabbits or hares, fresh, chilled or frozen.</i>	1	0.000	NI	1	100	6.4	6.4	0	0	--	--
6	040221	<i>Milk & cream, concentrate not sweetened, in powder, granules or other solid forms.</i>	9	0.040	1.9	0	0	--	---	9	100	US\$ 0.033/kg.	US\$ 1.56/kg.
7	040900	Natural honey.	1	43.000	1.8	0	0	--	--	1	100	US\$ 0.019/kg.	US\$ 0.019/kg.
8	070310	<i>Onion sets, fresh or chilled.</i>	3	1.000	1.1	0	0	--	--	3	100	US\$ 0.0083/kg.	US\$ 0.031/kg.
9	070320	Garlic, fresh or chilled.	1	14.000	0.5	0	0	--	--	1	100	US\$ 0.0043/kg.	US\$ 0.0043/kg.
10	071333	<i>Seeds of kidney beans and dried kidney beans.</i>	3	0.000	NI	0	0	--	--	3	100	US\$ 0.01/kg.	US\$ 0.015/kg.
11	080530	Lemons and limes, fresh or dried.	2	2.000	2.3	0	0	--	--	2	100	US\$ 0.018/kg.	US\$ 0.022/kg.
12	080810	Apples, fresh.	1	2.000	0.0	1	100	0.0	0.0	0	0	--	--
13	080820	Pears and quinces, fresh.	2	38.000	0.3	1	50	0.0	0.0	1	50	US\$ 0.003/kg.	US\$ 0.003/kg.
14	080940	<i>Plums, prunes and sloes, fresh.</i>	2	0.200	0.0	1	50	0.0	0.0	1	50	US\$ 0.005/kg.	US\$ 0.005/kg.
15	081320	Prunes and plums, dried.	2	0.300	12.6	1	50	0.0	0.0	1	50	US\$ 0.02/kg.	US\$ 0.02/kg.
16	090240	Black tea (fermented) and partly fermented tea, other than in immediate packings of a content not exceeding 3 kg.	1	35.000	0.0	1	100	0.0	0.0	0	0	--	--
17	090300	Mate.	1	1.000	0.0	1	100	0.0	0.0	0	0	--	--

TABLE 20 (cont.)

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Avg. Tariff (1)	Ad Valorem Tariff				Specific Tariff			
						Nº 8 digit	% Total 8 digit	Min.	Max.	Nº 8 digit	% Total 8 digit	Min.	Max.
18	100190	<i>Seed of wheat and meslin and wheat and meslin.</i>	2	0.000	NI	1	50	2.8	2.8	1	50	US\$ 0.0035/kg.	US\$ 0.0035/kg.
19	100510	Seed corn (maize).	1	47.000	0.0	1	100	0.0	0.0	0	0	--	--
20	100590	<i>Corn (maize) and yellow dent corn.</i>	2	0.020	0.2	0	0	--	--	2	100	US\$ 0.0005/kg.	US\$ 0.0025/kg.
21	100610	<i>Rice in the husk (paddy or rough).</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.018/kg.	US\$ 0.018/kg.
22	100700	Grain sorghum.	1	0.070	0.4	0	0	--	--	1	100	US\$ 0.0022/kg.	US\$ 0.0022/kg.
23	110100	<i>Wheat or meslin flour.</i>	1	0.005	0.5	0	0	--	--	1	100	US\$ 0.007/kg.	US\$ 0.007/kg.
24	110710	<i>Malt, not roasted.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.003/kg.	US\$ 0.003/kg.
25	120100	Soybeans, whether or not broken.	1	8.000	0.0	1	100	0.0	0.0	0	0	--	--
26	120220	Peanuts (ground-nuts), not roasted or cooked, shelled.	3	32.000	7.4	1	33	131.8	131.8	2	67	US\$ 0.066/kg.	US\$ 0.066/kg.
27	120600	Sunflower seeds, whether or not broken.	1	1.000	0.0	1	100	0.0	0.0	0	0	--	--
28	150710	<i>Crude soybean oil, whether or not degummed.</i>	1	0.000	NI	1	100	19.1	19.1	0	0	--	--
29	150790	<i>Soybean oil, other than crude, and its fractions, whether or not refined, but not chemically modified.</i>	1	0.006	17.5	1	100	19.1	19.1	0	0	--	--
30	150810	Crude peanut (ground-nut) oil.	1	14.000	9.1	0	0	--	--	1	100	US\$ 0.075/kg.	US\$ 0.075/kg.
31	150990	<i>Olive oil, other than virgin olive oil, and its fractions, not chemically modified.</i>	2	0.300	0.1	0	0	--	--	2	100	US\$ 0.034/kg.	US\$ 0.05/kg.
32	151211	Sunflower-seed or safflower oil, crude, and their fractions, whether or not refined, not chemically modified.	1	1.000	5.3	0	0	--	--	1	100	US\$ 0.017/kg.	US\$ 0.017/kg.
33	151219	<i>Sunflower seed or safflower oil, other than crude, and their fractions, whether or not refined, but not chemically modified.</i>	1	0.010	5.2	0	0	--	--	1	100	US\$ 0.017/kg.	US\$ 0.017/kg.
34	151229	Cottonseed oil, other than crude, and its fractions, whether or not refined, but not chemically modified.	1	5.000	9.0	0	0	--	--	1	100	US\$ 0.056/kg.	US\$ 0.056/kg.
35	151790	<i>Edible artificial mixtures of products provided for in headings 1501 to 1515.</i>	6	0.010	0.0	2	33	0.0	0.0	4	67	US\$ 0.088/kg.	US\$ 0.342/kg.

TABLE 20 (cont.)

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Avg. Tariff (1)	Ad Valorem Tariff				Specific Tariff			
						Nº 8 digit	% Total 8 digit	Min.	Max.	Nº 8 digit	% Total 8 digit	Min.	Max.
36	160250	Prepared or preserved meat of bovine animals (including corned beef).	6	82.000	1.9	6	100	0.0	4.5	0	0	--	--
37	200570	<i>Olives, prepared or preserved.</i>	16	0.200	0.2	0	0	--	--	16	100	US\$ 0.037/kg.	US\$ 0.101/kg.
38	200811	Blanched peanuts and peanuts, otherwise prepared or preserved.	9	8.000	3.8	5	56	0.0	131.8	4	44	US\$ 0.066/kg.	US\$ 0.066/kg.
39	200930	Citrus juice of any single citrus fruit.	4	9.000	37.7	0	0	--	--	4	100	US\$ 0.017/L.	US\$ 0.079/L.
40	200960	Grape juice (including grape must), concentrated or not concentrated.	1	39.000	12.3	0	0	--	--	1	100	US\$ 0.044/L.	US\$ 0.044/L.
41	200970	Apple juice, concentrated or not concentrated.	1	62.000	0.0	1	100	0.0	0.0	0	0	--	--
42	220710	Denatured ethyl alcohol of 80 percent vol. alcohol or higher.	2	8.000	2.4	1	50	2.5	2.5	1	50	US\$ 0.189/L.	US\$ 0.189/L.
43	230400	<i>Oilcake and other solid residues, resulting from the extraction of soybean oil.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.0045/kg.	US\$ 0.0045/kg.
44	230630	<i>Oilcake and other solid residues, resulting from the extraction of vegetable fats or oils, of sunflower seeds.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.0045/kg.	US\$ 0.0045/kg.
45	230890	Vegetable materials and vegetable waste, vegetable residues and by products, of a kind used in animal feeding.	3	1.000	1.2	3	100	0.0	1.9	0	0	--	--
46	240120	Tobacco, partly or wholly stemmed (stripped).	15	26.000	11.0	9	60	0.0	350.0	6	40	US\$ 0.375/kg.	US\$ 5.48/kg.
47	330113	Essential oils of lemon.	1	21.000	3.7	1	100	3.8	3.8	0	0	--	--
48	350300	Gelatin sheets and derivatives and glues of animal origin.	4	8.000	0.1	4	100	1.5	3.8	4	100	US\$ 0.012/kg.	US\$ 0.028/kg.
49	520100	Cotton, not carded or combed.	12	3.000	0.0	3	25	0.0	0.0	9	75	US\$ 0.015/kg.	US\$ 0.314/kg.

Notes: (1) Percentage of duties collected over US imports from Argentina at 6-digit level. NI = No Imports.

Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information from USITC TRADE DATAWEB, USHTS and CNCE.

TABLE 21
NON-TARIFF BARRIER STRUCTURE OF ARGENTINA EXPORTS OF AGRICULTURAL PRODUCTS
WITH IRCA WORLD GREATER OR EQUAL TO 1

Products where exports to the world are greater or equal to US\$ 10 million

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Non-Automatic Import License		Tariff Quota		Seasonal Tariff		Special Agriculture Safeguard		Antidumping/Compensatory Duty		Hard Core BNA (1)	
					Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit
1	020130	Bovine meat cuts, boneless, fresh or chilled.	7	13.000	7	100	3	43	0	0	1	14	0	0	7	100
2	020230	Bovine meat cuts, boneless, frozen.	7	28.000	7	100	3	43	0	0	1	14	0	0	7	100
3	020500	Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
4	020629	Edible offal of bovine animals, except tongues or livers, frozen.	1	1.000	1	100	0	0	0	0	0	0	0	0	1	100
5	020810	Meat and edible meat offal of rabbits or hares, fresh, chilled or frozen.	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
6	040221	Milk & cream, concentrate not sweetened, in powder, granules or other solid forms.	9	0.040	6	67	3	33	0	0	3	33	0	0	6	67
7	040900	Natural honey.	1	43.000	0	0	0	0	0	0	0	0	1	100	1	100
8	070310	Onion sets, fresh or chilled.	3	1.000	3	100	0	0	0	0	0	0	0	0	3	100
9	070320	Garlic, fresh or chilled.	1	14.000	1	100	0	0	0	0	0	0	0	0	1	100
10	071333	Seeds of kidney beans and dried kidney beans.	3	0.000	3	100	0	0	2	67	0	0	0	0	3	100
11	080530	Lemons and limes, fresh or dried.	2	2.000	2	100	0	0	0	0	0	0	0	0	2	100
12	080810	Apples, fresh.	1	2.000	1	100	0	0	0	0	0	0	0	0	1	100
13	080820	Pears and quinces, fresh.	2	38.000	1	50	0	0	1	50	0	0	0	0	1	50
14	080940	Plums, prunes and sloes, fresh.	2	0.200	2	100	0	0	2	100	0	0	0	0	2	100
15	081320	Prunes and plums, dried.	2	0.300	2	100	0	0	0	0	0	0	0	0	2	100
16	090240	Black tea (fermented) and partly fermented tea, other than in immediate packings of a content not exceeding 3 kg.	1	35.000	0	0	0	0	0	0	0	0	0	0	0	0
17	090300	Mate.	1	1.000	0	0	0	0	0	0	0	0	0	0	0	0
18	100190	Seed of wheat and meslin and wheat and meslin.	2	0.000	2	100	0	0	0	0	0	0	0	0	2	100

TABLE 21 (cont.)

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ Million)	Non-Automatic Import License		Tariff Quota		Seasonal Tariff		Special Agriculture Safeguard		Antidumping/Compensatory Duty		Hard Core BNA (1)	
					Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit
19	100510	Seed corn (maize).	1	47.000	1	100	0	0	0	0	0	0	0	0	1	100
20	100590	Corn (maize) and yellow dent corn.	2	0.020	2	100	0	0	0	0	0	0	0	0	2	100
21	100610	Rice in the husk (paddy or rough).	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
22	100700	Grain sorghum.	1	0.070	1	100	0	0	0	0	0	0	0	0	1	100
23	110100	Wheat or meslin flour.	1	0.005	0	0	0	0	0	0	0	0	0	0	0	0
24	110710	Malt, not roasted.	1	0.000	0	0	0	0	0	0	0	0	0	0	0	0
25	120100	Soybeans, whether or not broken.	1	8.000	1	100	0	0	0	0	0	0	0	0	1	100
26	120220	Peanuts (ground-nuts), not roasted or cooked, shelled.	3	32.000	0	0	1	33	0	0	1	33	0	0	2	67
27	120600	Sunflower seeds, whether or not broken.	1	1.000	0	0	0	0	0	0	0	0	0	0	0	0
28	150710	Crude soybean oil, whether or not degummed.	1	0.000	0	0	0	0	0	0	0	0	0	0	0	0
29	150790	Soybean oil, other than crude, and its fractions, whether or not refined, but not chemically modified.	1	0.006	0	0	0	0	0	0	0	0	0	0	0	0
30	150810	Crude peanut (ground-nut) oil.	1	14.000	0	0	0	0	0	0	0	0	0	0	0	0
31	150990	Olive oil, other than virgin olive oil, and its fractions, not chemically modified.	2	0.300	0	0	0	0	0	0	0	0	0	0	0	0
32	151211	Sunflower-seed or safflower oil, crude, and their fractions, whether or not refined, not chemically modified.	1	1.000	0	0	0	0	0	0	0	0	0	0	0	0
33	151219	Sunflower seed or safflower oil, other than crude, and their fractions, whether or not refined, but not chemically modified.	1	0.010	0	0	0	0	0	0	0	0	0	0	0	0
34	151229	Cottonseed oil, other than crude, and its fractions, whether or not refined, but not chemically modified.	1	5.000	0	0	0	0	0	0	0	0	0	0	0	0
35	151790	Edible artificial mixtures of products provided for in headings 1501 to 1515.	6	0.010	2	33	1	17	0	0	1	17	0	0	2	33
36	160250	Prepared or preserved meat of bovine animals (inc. corned beef).	6	82.000	6	100	0	0	0	0	0	0	0	0	6	100

TABLE 21 (cont.)

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Non-Automatic Import License		Tariff Quota		Seasonal Tariff		Special Agriculture Safeguard		Antidumping/Compensatory Duty		Hard Core BNA (1)	
					Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit
37	200570	<i>Olives, prepared or preserved.</i>	16	0.002	15	94	4	25	0	0	0	0	0	0	15	94
38	200811	Blanched peanuts and peanuts, otherwise prepared or preserved.	9	8.000	9	100	3	33	0	0	3	33	0	0	9	100
39	200930	Citrus juice of any single citrus fruit.	4	9.000	4	100	0	0	0	0	0	0	0	0	4	100
40	200960	Grape juice (including grape must), concentrated or not concentrated.	1	39.000	1	100	0	0	0	0	0	0	0	0	1	100
41	200970	Apple juice, concentrated or not concentrated.	1	62.000	1	100	0	0	0	0	0	0	0	0	1	100
42	220710	Denatured ethyl alcohol of 80 percent vol. alcohol or higher.	2	8.000	2	100	0	0	0	0	0	0	0	0	2	100
43	230400	<i>Oilcake and other solid residues, resulting from the extraction of soybean oil.</i>	1	0.000	0	0	0	0	0	0	0	0	0	0	0	0
44	230630	<i>Oilcake and other solid residues, resulting from the extraction of vegetable fats or oils, of sunflower seeds.</i>	1	0.000	0	0	0	0	0	0	0	0	0	0	0	0
45	230890	Vegetable materials and vegetable waste, vegetable residues and by products, of a kind used in animal feeding.	3	1.000	0	0	0	0	0	0	0	0	0	0	0	0
46	240120	Tobacco, partly or wholly stemmed (stripped).	15	26.000	0	0	7	47	0	0	0	0	0	0	7	47
47	330113	Essential oils of lemon.	1	21.000	1	100	0	0	0	0	0	0	0	0	1	100
48	350300	Gelatin sheets and derivatives and glues of animal origin.	4	8.000	4	100	0	0	0	0	0	0	0	0	4	100
49	520100	Cotton, not carded or combed.	12	3.000	11	92	7	58	0	0	4	33	0	0	12	100

Notes: (1) Items that have at least one hard core NTB.

Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information from USITC TRADE DATAWEB, USHTS and CNCE.

TABLE 22
TARIFF STRUCTURE OF BRAZIL EXPORTS OF AGRICULTURAL PRODUCTS WITH IRCA WORLD GREATER OR EQUAL TO 1
 Products where exports to the world are greater or equal to US\$ 10 million

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Avrg. Tariff (1)	Ad Valorem Tariff				Specific Tariff			
						Nº 8 digit	% Total 8 digit	Min.	Max.	Nº 8 digit	% Total 8 digit	Min.	Max.
1	020230	<i>Bovine meat cuts, boneless, frozen.</i>	7	0.00	NI	5	71	4.0	26.4	2	29	US\$ 0.044/kg.	US\$ 0.044/kg.
2	020329	<i>Frozen meat of swine.</i>	2	0.00	NI	1	50	0.0	0.0	1	50	US\$ 0.014/kg.	US\$ 0.014/kg.
3	020500	<i>Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.</i>	1	0.00	NI	1	100	0.0	0.0	0	0	--	--
4	020712	<i>Chickens, not cut in pieces, frozen.</i>	1	0.00	NI	0	0	--	--	1	100	US\$ 0.088/kg.	US\$ 0.088/kg.
5	020714	<i>Cuts and offal of chickens, frozen.</i>	1	0.00	NI	0	0	--	--	1	100	US\$ 0.176/kg.	US\$ 0.176/kg.
6	020727	<i>Cuts and offal of turkeys, frozen.</i>	1	0.00	NI	0	0	--	--	1	100	US\$ 0.176/kg.	US\$ 0.176/kg.
7	080121	Brazil nuts, fresh or dried, in shell.	1	6.00	0.0	1	100	0.0	0.0	0	0	--	--
8	080132	Cashew nuts, fresh or dried, shelled.	1	105.00	0.0	1	100	0.0	0.0	0	0	--	--
9	080450	Guavas, mangoes, and mangosteens, fresh and dried.	3	14.00	0.0	0	0	--	--	3	100	US\$ 0.015/kg.	US\$ 0.066/kg.
10	080719	<i>Melons, fresh.</i>	6	0.10	0.0	6	100	0.0	29.8	0	0	--	--
11	080720	<i>Papayas (papaws), fresh.</i>	1	4.00	0.01	1	100	5.4	5.4	0	0	--	--
12	090111	<i>Coffee, not roasted, not decaffeinated.</i>	1	372.00	0.0	1	100	0.0	0.0	0	0	--	--
13	090300	<i>Mate.</i>	1	0.10	0.0	1	100	0.0	0.0	0	0	--	--
14	090411	Pepper of the genus Piper, neither crushed nor ground.	1	33.00	0.0	1	100	0.0	0.0	0	0	--	--
15	120100	<i>Soybeans, whether or not broken.</i>	1	0.20	0.0	1	100	0.0	0.0	0	0	--	--
16	120929	<i>Seeds of forage plants of a kind used for sowing.</i>	1	0.03	0.0	1	100	0.0	0.0	0	0	--	--
17	150710	<i>Crude soybean oil, whether or not degummed.</i>	1	0.00	NI	1	100	19.1	19.1	0	0	--	--
18	150790	<i>Soybean oil, other than crude, and its fractions, whether or not refined, but not chemically modified.</i>	1	0.01	19.3	1	100	19.1	19.1	0	0	--	--
19	152110	Vegetable waxes (other than triglycerides), whether or not refined or colored.	1	13.00	0.0	1	100	0.0	0.0	0	0	--	--
20	160250	Prepared or preserved meat of bovine animals (inc. corned beef).	6	109.00	0.2	6	100	0.0	4.5	0	0	--	--
21	170111	<i>Cane sugar, raw, in solid form.</i>	4	78.00	1.4	0	0	--	--	4	100	US\$ 0.015/kg.	US\$ 0.3387/kg.

TABLE 22 (cont.)

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Avg. Tariff (1)	Ad Valorem Tariff				Specific Tariff			
						Nº 8 digit	% Total 8 digit	Min.	Max.	Nº 8 digit	% Total 8 digit	Min.	Max.
22	170199	Cane/beet sugar & pure sucrose, refined, solid, w/o added coloring or flavoring.	3	1.00	3.3	0	0	--	--	3	100	US\$ 0.037/kg.	US\$ 0.3574/kg.
23	170410	Chewing gum, not containing cocoa, whether or not sugar-coated.	1	2.00	0.0	1	100	0.0	0.0	0	0	--	--
24	180310	Cocoa paste, not defatted.	1	2.00	0.0	1	100	0.0	0.0	0	0	--	--
25	180400	Cocoa butter, fat and oil.	1	22.48	0.0	1	100	0.0	0.0	0	0	--	--
26	200891	Palm hearts, otherwise prepared or preserved.	1	4.00	0.0	1	100	0.9	0.9	0	0	--	--
27	200911	Orange juice, frozen, unfermented and not containing added spirit.	1	154.00	43.5	0	0	--	--	1	100	US\$ 0.079/L.	US\$ 0.079/L.
28	210111	Unflavored instant coffee and extracts, essences and concentrates of coffee.	2	40.70	0.0	2	100	0.0	0.0	0	0	--	--
29	220710	Denatured ethyl alcohol of 80 percent vol. Alcohol or higher.	2	3.00	2.3	1	50	2.5	2.5	1	50	US\$ 0.189/L.	US\$ 0.189/L.
30	230400	Oilcake and other solid residues, resulting from the extraction of soybean oil.	1	0.00	NI	0	0	--	--	1	100	US\$ 0.0045/kg.	US\$ 0.0045/kg.
31	230890	Vegetable materials and vegetable waste, vegetable residues and by products, of a kind used in animal feeding.	3	0.00	NI	3	100	0.0	1.9	0	0	--	--
32	240110	Tobacco, not stemmed or stripped, not or not over 35% wrapper tobacco, not flue-cured burley.	9	0.20	0.1	6	67	0.0	350.0	3	33	US\$ 0.239/kg.	US\$ 0.327/kg.
33	240120	Tobacco, partly or wholly stemmed (stripped).	15	125.00	10.3	9	60	0.0	350.0	6	40	US\$ 0.375/kg.	US\$ 5.48/kg.
34	240130	Tobacco refuse.	13	7.00	0.1	9	69	0.0	350.0	4	31	US\$ 0.284/kg.	US\$ 0.97/kg.
35	330112	Essential oils of orange.	1	13.80	2.6	1	100	2.7	2.7	0	0	--	--
36	330190	Concentrates of essential oils; terpenic by-product of essential oils; aqueous distillates & solutions of essential oils.	2	1.00	0.1	2	100	0.0	3.8	0	0	--	--
37	350300	Gelatin sheets and derivatives and glues of animal origin.	4	18.00	0.9	4	100	1.5	3.8	4	100	US\$ 0.012/kg.	US\$ 0.028/kg.

Notes: (1) Percentage of duties collected over US imports from Argentina at 6-digit level. NI = No Imports.

Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information from USITC TRADE DATAWEB, USHTS and CNCE.

TABLE 23

NON-TARIFF BARRIER STRUCTURE OF BRAZIL EXPORTS OF AGRICULTURAL PRODUCTS WITH IRCA WORLD GREATER OR EQUAL TO 1
 Products where exports to the world are greater or equal to US\$ 10 million

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Non-Automatic Import License		Tariff Quota		Seasonal Tariff		Special Agriculture Safeguard		Antidumping/Compensatory Duty		Hard Core BNA (1)	
					Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit
1	020230	<i>Bovine meat cuts, boneless, frozen.</i>	7	0.00	7	100	3	43	0	0	1	14	0	0	7	100
2	020329	<i>Frozen meat of swine.</i>	2	0.00	2	100	0	0	0	0	0	0	0	0	2	100
3	020500	<i>Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.</i>	1	0.00	1	100	0	0	0	0	0	0	0	0	1	100
4	020712	<i>Chickens, not cut in pieces, frozen.</i>	1	0.00	1	100	0	0	0	0	0	0	0	0	1	100
5	020714	<i>Cuts and offal of chickens, frozen.</i>	1	0.00	1	100	0	0	0	0	0	0	0	0	1	100
6	020727	<i>Cuts and offal of turkeys, frozen.</i>	1	0.00	1	100	0	0	0	0	0	0	0	0	1	100
7	080121	Brazil nuts, fresh or dried, in shell.	1	6.00	1	100	0	0	0	0	0	0	0	0	1	100
8	080132	Cashew nuts, fresh or dried, shelled.	1	105.00	1	100	0	0	0	0	0	0	0	0	1	100
9	080450	Guavas, mangoes, and mangosteens, fresh and dried.	3	14.00	3	100	0	0	2	67	0	0	0	0	3	100
10	080719	<i>Melons, fresh.</i>	6	0.10	6	100	0	0	6	100	0	0	0	0	6	100
11	080720	<i>Papayas (papaws), fresh.</i>	1	4.00	1	100	0	0	0	0	0	0	0	0	1	100
12	090111	<i>Coffee, not roasted, not decaffeinated.</i>	1	372.00	0	0	0	0	0	0	0	0	0	0	0	0
13	090300	<i>Mate.</i>	1	0.10	0	0	0	0	0	0	0	0	0	0	0	0
14	090411	Pepper of the genus Piper, neither crushed nor ground.	1	33.00	0	0	0	0	0	0	0	0	0	0	0	0
15	120100	<i>Soybeans, whether or not broken.</i>	1	0.20	1	100	0	0	0	0	0	0	0	0	1	100
16	120929	<i>Seeds of forage plants of a kind used for sowing.</i>	1	0.03	0	0	0	0	0	0	0	0	0	0	0	0
17	150710	<i>Crude soybean oil, whether or not degummed.</i>	1	0.00	0	0	0	0	0	0	0	0	0	0	0	0
18	150790	<i>Soybean oil, other than crude, and its fractions, whether or not refined, but not chemically modified.</i>	1	0.01	0	0	0	0	0	0	0	0	0	0	0	0
19	152110	Vegetable waxes (other than triglycerides), whether or not refined or colored.	1	13.00	1	100	0	0	0	0	0	0	0	0	1	100
20	160250	Prepared or preserved meat of bovine animals (inc. corned beef).	6	109.00	6	100	0	0	0	0	0	0	0	0	6	100
21	170111	<i>Cane sugar, raw, in solid form.</i>	4	78.00	4	100	1	25	0	0	1	25	0	0	4	100

TABLE 23 (cont.)

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Non-Automatic Import License		Tariff Quota		Seasonal Tariff		Special Agriculture Safeguard		Antidumping/Compensatory Duty		Hard Core BNA (1)	
					Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit
22	170199	Cane/beet sugar & pure sucrose, refined, solid, w/o added coloring or flavoring.	3	1.00	3	100	1	33	0	0	1	33	0	0	3	100
23	170410	Chewing gum, not containing cocoa, whether or not sugar-coated.	1	2.00	0	0	0	0	0	0	0	0	0	0	0	0
24	180310	Cocoa paste, not defatted.	1	2.00	0	0	0	0	0	0	0	0	0	0	0	0
25	180400	Cocoa butter, fat and oil.	1	22.48	0	0	0	0	0	0	0	0	0	0	0	0
26	200891	Palm hearts, otherwise prepared or preserved.	1	4.00	1	100	0	0	0	0	0	0	0	0	1	100
27	200911	Orange juice, frozen, unfermented and not containing added spirit.	1	154.00	1	100	0	0	0	0	0	0	0	0	1	100
28	210111	Unflavored instant coffee and extracts, essences and concentrates of coffee.	2	40.70	2	100	0	0	0	0	0	0	0	0	2	100
29	220710	Denatured ethyl alcohol of 80 percent vol. alcohol or higher.	2	3.00	0	0	0	0	0	0	0	0	0	0	0	0
30	230400	Oilcake and other solid residues, resulting from the extraction of soybean oil.	1	0.00	0	0	0	0	0	0	0	0	0	0	0	0
31	230890	Vegetable materials and vegetable waste, vegetable residues and by products, of a kind used in animal feeding.	3	0.00	0	0	0	0	0	0	0	0	0	0	0	0
32	240110	Tobacco, not stemmed or stripped, not or not over 35% wrapper tobacco, not flue-cured burley.	9	0.20	0	0	3	33	0	0	0	0	0	0	3	33
33	240120	Tobacco, partly or wholly stemmed (stripped).	15	125.00	0	0	7	47	0	0	0	0	0	0	7	47
34	240130	Tobacco refuse.	13	7.00	0	0	7	54	0	0	0	0	0	0	7	54
35	330112	Essential oils of orange.	1	13.80	1	100	0	0	0	0	0	0	0	0	1	100
36	330190	Concentrates of essential oils; terpenic by-product of essential oils; aqueous distillates & solutions of essential oils.	2	1.00	2	100	0	0	0	0	0	0	0	0	2	100
37	350300	Gelatin sheets and derivatives and glues of animal origin.	4	18.00	4	100	0	0	0	0	0	0	0	0	4	100

Notes: (1) Items that have at least one hard core NTB.

Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information from USITC TRADE DATAWEB, USHTS and CNCE.

TABLE 24
TARIFF STRUCTURE OF URUGUAY EXPORTS OF AGRICULTURAL PRODUCTS WITH IRCA WORLD GREATER
OR EQUAL TO 1 - ORDERED DECREASINGLY BY IRCA WORLD
 Products where exports to the world are greater or equal to US\$ 1 million

N°	HTS 6 digits	Description	N° 8 digits	Exports to US (US\$ million)	Avg. Tariff (1)	Ad Valorem Tariff				Specific Tariff			
						N° 8 digit	% Total 8 digit	Min.	Max.	N° 8 digit	% Total 8 digit	Min.	Max.
1	010290	<i>Live bovine animals other than purebred or those imported for dairy purposes.</i>	2	0.000	NI	1	50	0.0	0.0	1	50	US\$ 0.01/unit.	US\$ 0.01/unit.
2	010410	<i>Live sheep.</i>	1	0.000	NI	1	100	0.0	0.0	0	0	--	--
3	020120	<i>Bovine meat cuts, with bone in, fresh or chilled.</i>	7	0.000	NI	5	71	4.0	26.4	2	29	US\$ 0.044/kg.	US\$ 0.044/kg.
4	020130	Bovine meat cuts, boneless, fresh or chilled.	7	13.000	1.5	5	71	4.0	26.4	2	29	US\$ 0.044/kg.	US\$ 0.044/kg.
5	020220	Bovine meat cuts, w/bone in, frozen.	7	0.050	1.3	5	71	4.0	26.4	2	29	US\$ 0.044/kg.	US\$ 0.044/kg.
6	020230	Bovine meat cuts, boneless, frozen.	7	27.000	3.3	5	71	4.0	26.4	2	29	US\$ 0.044/kg.	US\$ 0.044/kg.
7	020421	<i>Carcasses and half-carcasses of sheep, other than lamb, fresh or chilled.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.028/kg.	US\$ 0.028/kg.
8	020423	<i>Boneless meat of sheep, fresh or chilled.</i>	2	0.000	NI	0	0	--	--	2	100	US\$ 0.007/kg.	US\$ 0.028/kg.
9	020430	Carcasses and half-carcasses of lamb, frozen.	1	0.020	0.3	0	0	--	--	1	100	US\$ 0.007/kg.	US\$ 0.007/kg.
10	020441	<i>Carcasses and half-carcasses of sheep, other than lamb, frozen.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.028/kg.	US\$ 0.028/kg.
11	020442	Cuts of sheep meat with bone in, frozen.	2	1.000	0.2	0	0	--	--	2	100	US\$ 0.007/kg.	US\$ 0.028/kg.
12	020443	Boneless meat of sheep, frozen.	2	0.030	0.2	0	0	--	--	2	100	US\$ 0.007/kg.	US\$ 0.028/kg.
13	020500	<i>Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.</i>	1	0.000	NI	1	100	0.0	0.0	0	0	--	--
14	020621	Tongues of bovine animals, frozen.	1	0.200	0.0	1	100	0.0	0.0	0	0	--	--
15	020629	Edible offal of bovine animals, except tongues or livers, frozen.	1	2.000	0.0	1	100	0.0	0.0	0	0	--	--
16	021020	Meat of bovine animals, salted, in brine, dried or smoked.	1	1.000	0.0	1	100	0.0	0.0	0	0	--	--

TABLE 24 (cont.)

N°	HTS 6 digits	Description	N° 8 digits	Exports to US (US\$ million)	Avg. Tariff (1)	Ad Valorem Tariff				Specific Tariff			
						N° 8 digit	% Total 8 digit	Min.	Max.	N° 8 digit	% Total 8 digit	Min.	Max.
17	040110	<i>Milk and cream, not concentrated, with no added sweeteners, fat content, by weight, not more than 1 percent.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.0034/L.	US\$ 0.0034/L.
18	040120	<i>Milk and cream, not concentrated, unsweetened, fat content over 1% but n/o 6%.</i>	2	0.000	NI	0	0	--	--	2	100	US\$ 0.0043/L.	US\$ 0.015/L.
19	040210	<i>Milk and cream, concentrated or sweetened, in powder, granules or other solid forms.</i>	3	0.000	NI	0	0	--	--	3	100	US\$ 0.033/kg.	US\$ 0.865/kg.
20	040221	<i>Milk & cream, concentrate not sweetened, in powder, granules or other solid forms.</i>	9	0.000	NI	0	0	--	--	9	100	US\$ 0.033/kg.	US\$ 1.56/kg.
21	040510	Butter.	3	0.500	46.0	0	0	--	--	3	100	US\$ 0.123/kg.	US\$ 1.54/kg.
22	040620	Cheeses, grated or powdered.	38	0.200	9.7	25	66	0.0	20.0	13	34	US\$ 1.055/kg.	US\$ 2.269/kg.
23	040690	Cheeses and substitutes for cheese.	51	3.000	14.2	36	71	0.0	25.0	15	29	US\$ 1.055/kg.	US\$ 2.269/kg.
24	040900	<i>Natural honey.</i>	1	0.100	2.0	0	0	--	--	1	100	US\$ 0.019/kg.	US\$ 0.019/kg.
25	050400	Guts, bladders and stomachs of animals (other than fish), whole and pieces thereof.	1	1.000	0.0	1	100	0.0	0.0	0	0	--	--
26	051000	<i>Cantharides; bile; glands and other animal products used in pharmaceutical products.</i>	2	0.000	NI	2	100	0.0	5.1	0	0	--	--
27	080510	<i>Oranges, fresh or dried.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.019/kg.	US\$ 0.019/kg.
28	080520	<i>Mandarins (including tangerines and satsumas); clementines, wilkings and similar citrus hybrids, fresh or dried.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.019/kg.	US\$ 0.019/kg.
29	080530	<i>Lemons and limes, fresh or dried.</i>	2	0.000	NI	0	0	--	--	2	100	US\$ 0.018/kg.	US\$ 0.022/kg.
30	100610	<i>Rice in the husk (paddy or rough).</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.018/kg.	US\$ 0.018/kg.
31	100620	<i>Husked rice.</i>	2	0.000	NI	0	0	--	--	2	100	US\$ 0.0083/kg.	US\$ 0.021/kg.
32	100630	<i>Rice semi-milled or wholly milled, whether or not polished or glazed.</i>	2	0.005	2.3	1	50	11.2	11.2	1	50	US\$ 0.014/kg.	US\$ 0.014/kg.

TABLE 24 (cont.)

N°	HTS 6 digits	Description	N° 8 digits	Exports to US (US\$ million)	Avg. Tariff (1)	Ad Valorem Tariff				Specific Tariff			
						N° 8 digit	% Total 8 digit	Min.	Max.	N° 8 digit	% Total 8 digit	Min.	Max.
33	100640	<i>Broken rice.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.0044/kg.	US\$ 0.0044/kg.
34	110710	<i>Malt, not roasted.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.003/kg.	US\$ 0.003/kg.
35	120600	<i>Sunflower seeds, whether or not broken.</i>	1	0.000	NI	1	100	0.0	0.0	0	0	--	--
36	120929	Seeds of forage plants of a kind used for sowing.	1	0.200	0.0	1	100	0.0	0.0	0	0	--	--
37	150200	<i>Fats of bovine animals, sheep or goats.</i>	1	0.000	NI	0	0	--	--	1	100	US\$ 0.0043/kg.	US\$ 0.0043/kg.
38	150590	<i>Fatty substances derived from wool grease (including lanolin).</i>	1	0.020	0.0	1	100	2.4	2.4	0	0	--	--
39	160250	Prepared or preserved meat of bovine animals (inc. corned beef).	6	5.000	0.7	6	100	0.0	4.5	0	0	--	--
40	200930	Citrus juice of any single citrus fruit.	4	0.100	37.8	0	0	--	--	4	100	US\$ 0.017/L.	US\$ 0.079/L.
41	240220	<i>Cigarettes containing tobacco.</i>	3	0.000	NI	0	0	--	--	3	100	US\$ 0.417/kg.	US\$ 1.5/kg.
42	330113	Essential oils of lemon.	1	0.100	3.6	1	100	3.8	3.8	0	0	--	--
43	510111	Wool, greasy, shorn, not carded or combed.	5	0.400	4.0	4	80	0.0	0.0	1	20	US\$ 0.187/kg.	US\$ 0.187/kg.
44	510129	Wool, degreased, not shorn, not carded or combed.	7	0.100	7.4	5	71	0.0	0.0	2	29	US\$ 0.065/kg.	US\$ 0.206/kg.
45	510310	Wool, carbonized, not carded or combed.	1	1.000	0.0	0	0	--	--	1	100	US\$ 0.026/kg.	US\$ 0.026/kg.

Notes: (1) Percentage of duties collected over US imports from Argentina at 6-digit level. NI = No Imports.

Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information from USITC TRADE DATAWEB, USHTS and CNCE.

TABLE 25
NON-TARIFF BARRIER STRUCTURE OF URUGUAY EXPORTS OF AGRICULTURAL PRODUCTS WITH IRCA WORLD GREATER
OR EQUAL TO 1 - ORDERED DECREASINGLY BY IRCA WORLD
 Products where exports to the world are greater or equal to US\$ 1 million

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Non-Automatic Import License		Tariff Quota		Seasonal Tariff		Special Agriculture Safeguard		Antidumping/ Compensatory Duty		Hard Core BNA (1)	
					Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit
1	010290	<i>Live bovine animals other than purebred or those imported for dairy purposes.</i>	2	0.000	2	100	0	0	0	0	0	0	0	0	2	100
2	010410	<i>Live sheep.</i>	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
3	020120	<i>Bovine meat cuts, with bone in, fresh or chilled.</i>	7	0.000	7	100	3	43	0	0	1	14	0	0	7	100
4	020130	Bovine meat cuts, boneless, fresh or chilled.	7	13.000	7	100	3	43	0	0	1	14	0	0	7	100
5	020220	Bovine meat cuts, w/bone in, frozen.	7	0.050	7	100	3	43	0	0	1	14	0	0	7	100
6	020230	Bovine meat cuts, boneless, frozen.	7	27.000	7	100	3	43	0	0	1	14	0	0	7	100
7	020421	<i>Carcasses and half-carcasses of sheep, other than lamb, fresh or chilled.</i>	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
8	020423	<i>Boneless meat of sheep, fresh or chilled.</i>	2	0.000	2	100	1	50	0	0	0	0	0	0	2	100
9	020430	Carcasses and half-carcasses of lamb, frozen.	1	0.020	1	100	1	100	0	0	0	0	0	0	1	100
10	020441	<i>Carcasses and half-carcasses of sheep, other than lamb, frozen.</i>	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
11	020442	Cuts of sheep meat with bone in, frozen.	2	1.000	2	100	1	50	0	0	0	0	0	0	2	100
12	020443	Boneless meat of sheep, frozen.	2	0.030	2	100	1	50	0	0	0	0	0	0	2	100
13	020500	<i>Meat of horses, asses, mules or hinnies, fresh, chilled or frozen.</i>	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
14	020621	Tongues of bovine animals, frozen.	1	0.200	1	100	0	0	0	0	0	0	0	0	1	100
15	020629	Edible offal of bovine animals, except tongues or livers, frozen.	1	2.000	1	100	0	0	0	0	0	0	0	0	1	100
16	021020	Meat of bovine animals, salted, in brine, dried or smoked.	1	1.000	1	100	0	0	0	0	0	0	0	0	1	100

TABLE 25 (cont.)

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ million)	Non-Automatic Import License		Tariff Quota		Seasonal Tariff		Special Agriculture Safeguard		Antidumping/ Compensatory Duty		Hard Core BNA (1)	
					Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit
17	040110	<i>Milk and cream, not concentrated, with no added sweeteners, fat content, by weight, not more than 1 percent.</i>	1	0.000	0	0	0	0	0	0	0	0	0	0	0	0
18	040120	<i>Milk and cream, not concentrated, unsweetened, fat content over 1% but n/o 6%.</i>	2	0.000	2	100	0	0	0	0	0	0	0	0	2	100
19	040210	<i>Milk and cream, concentrated or sweetened, in powder, granules or other solid forms.</i>	3	0.000	2	67	1	33	0	0	1	33	0	0	2	67
20	040221	<i>Milk & cream, concentrate not sweetened, in powder, granules or other solid forms.</i>	9	0.000	6	67	3	33	0	0	3	33	0	0	6	67
21	040510	Butter.	3	0.500	2	67	1	33	0	0	1	33	0	0	2	67
22	040620	Cheeses, grated or powdered.	38	0.200	38	100	14	37	0	0	13	34	0	0	38	100
23	040690	Cheeses and substitutes for cheese.	51	3.000	50	98	15	29	0	0	15	29	0	0	50	98
24	040900	<i>Natural honey.</i>	1	0.100	0	0	0	0	0	0	0	0	0	0	1	100
25	050400	Guts, bladders and stomachs of animals (other than fish), whole and pieces thereof.	1	1.000	1	100	0	0	0	0	0	0	0	0	1	100
26	051000	<i>Cantharides; bile; glands and other animal products used in pharmaceutical products.</i>	2	0.000	2	100	0	0	0	0	0	0	0	0	2	100
27	080510	<i>Oranges, fresh or dried.</i>	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
28	080520	<i>Mandarins (including tangerines and satsumas); clementines, wilkings and similar citrus hybrids, fresh or dried.</i>	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
29	080530	<i>Lemons and limes, fresh or dried.</i>	2	0.000	2	100	0	0	0	0	0	0	0	0	2	100
30	100610	<i>Rice in the husk (paddy or rough).</i>	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100
31	100620	<i>Husked rice.</i>	2	0.000	2	100	0	0	0	0	0	0	0	0	2	100
32	100630	<i>Rice semi-milled or wholly milled, whether or not polished or glazed.</i>	2	0.005	2	100	0	0	0	0	0	0	0	0	2	100
33	100640	<i>Broken rice.</i>	1	0.000	1	100	0	0	0	0	0	0	0	0	1	100

TABLE 25 (cont.)

Nº	HTS 6 digits	Description	Nº 8 digits	Exports to US (US\$ Million)	Non-Automatic Import License		Tariff Quota		Seasonal Tariff		Special Agriculture Safeguard		Antidumping/ Compensatory Duty		Hard Core BNA (1)	
					Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit	Nº 8 digit	% Total 8 digit
34	110710	<i>Malt, not roasted.</i>	1	0.000	0	0	0	0	0	0	0	0	0	0	0	0
35	120600	<i>Sunflower seeds, whether or not broken.</i>	1	0.000	0	0	0	0	0	0	0	0	0	0	0	0
36	120929	Seeds of forage plants of a kind used for sowing.	1	0.200	0	0	0	0	0	0	0	0	0	0	0	0
37	150200	<i>Fats of bovine animals, sheep or goats.</i>	1	0.000	1	100	0	0	0	0	0	0	0	1	100	
38	150590	<i>Fatty substances derived from wool grease (including lanolin).</i>	1	0.020	0	0	0	0	0	0	0	0	0	0	0	0
39	160250	Prepared or preserved meat of bovine animals (inc. corned beef).	6	5.000	6	100	0	0	0	0	0	0	0	0	6	100
40	200930	Citrus juice of any single citrus fruit.	4	0.100	4	100	0	0	0	0	0	0	0	4	100	
41	240220	<i>Cigarettes containing tobacco.</i>	3	0.000	0	0	0	0	0	0	0	0	0	0	0	0
42	330113	Essential oils of lemon.	1	0.100	1	100	0	0	0	0	0	0	0	1	100	
43	510111	Wool, greasy, shorn, not carded or combed.	5	0.400	0	0	0	0	0	0	0	0	0	0	0	0
44	510129	Wool, degreased, not shorn, not carded or combed.	7	0.100	0	0	0	0	0	0	0	0	0	0	0	0
45	510310	Wool, carbonized, not carded or combed.	1	1.000	0	0	0	0	0	0	0	0	0	0	0	0

Notes: (1) Items that have at least one hard core NTB.

Those products where IRCA WORLD is greater or equal to 1 and IRCA-US is less than 1, are in italics and bold.

Those products where IRCA WORLD is greater than IRCA-US, and IRCA-US is greater or equal to 1, are in bold.

Source: Own elaboration upon information from USITC TRADE DATAWEB, USHTS and CNCE.

Uruguay has also been comparatively less successful in exporting to US citrus like Oranges, Mandarins and Lemons. Nevertheless, in these cases border protection in the form of specific tariffs are not to blame; the equivalent rates for these commodities are quite low (2% for oranges and 1.3% for mandarins), though the presence of licensing requirements may have affected the introduction of these products in the US market. On the other hand, as in the case of Argentina, Uruguay exports of Juice made out of citrus fruit did face strong border protection in the form of specific duties equivalent to a 37.8% *ad valorem* tariff rate.

From the above evidence about tariff and non-tariff barriers, we can conclude that the divergence found for some products between the IRCA indicators is in part a consequence of the presence of border barriers in the United States economy. Within this list of key Mercosur products, the ones that face the strongest barriers are Bovine Meat Fresh and Frozen, Chicken and Turkey Cuts, Powder Milk, Cheeses and Butter, Citrus (including orange) Juice, Sugar, Peanuts and Tobacco.

What could be the consequence on Mercosur exports of a complete elimination of these trade barriers? There is no easy answer to this question and it is not the purpose of this report to develop these estimates. The results will greatly depend on the assumptions regarding the negotiation context in which such tariff reductions are made (multilateral, regional or bilateral) and also the type of model we use to isolate the effect of the tariff elimination.

For the case of Argentina exports to US, there are already available estimations using a partial equilibrium framework (see CNCE [1999]) and also general equilibrium computable models (GECM) (see Fundación Mediterránea [2001]). Both types of estimations predict sensible increments of export for some products (for example, the GECM model predicts a 60% raise in sugar exports, 20% raise in dairy, 11% raise in vegetables and fruits).

Still, both methodologies tend to underestimate the resulting increases in exports. This is because these projections are made based upon historical levels, which as we have seen are quite low in cases of products subject to significant trade barriers. So to apply the predicted percentage increase in exports upon that very small initial value tends to drastically underestimate the effect of trade liberalization.

An alternative way to evaluate the extent to which Mercosur exports would raise is to look at the NAFTA experience for similar products. Of course, the experience of NAFTA cannot be mechanically translated to Mercosur even if we assume that the same level of tariff reduction (that is, total liberalization) can be achieved (this point is discussed in detail in Chapter III.C below). This is because of the fact that both Mexico and Canada are border economies, which allows great savings not only in terms of direct transport costs but also in other general transaction outlays. There are many studies that have calculated the effect of transport cost on trade and the special character that a border economy plays in its dynamics (see, for example, Engel and Roger [1994] for US-Canada and Garriga and Sanguinetti [1995] for Argentina-Brazil).

Thus we cannot expect that an eventual US-Mercosur agreement would generate increases in Mercosur exports near those we observed for Mexico and Canada. Still, even if we assume that trade creation will be of much smaller magnitude, the resulting value for some of the above commodities could still be very significant. For example, if we were to assume that complete elimination of bovine meat trade barriers could generate an increase in US import of meat from Mercosur equivalent to 10% of that observed from Canada, that would imply approximately an additional US\$ 100 million in exports from Mercosur origins.

III. NEGOTIATING AGRICULTURE LIBERALIZATION WITH US: LESSONS FROM NAFTA

Agriculture has always been a very sensitive sector in international trade negotiations. At the multilateral level, the GATT from its beginning has treated agriculture differently from most other sectors, allowing for the use of quantitative restrictions and other type of trade-distorting subsidies. It was only recently, in the Uruguay Round (UR) held between 1986-1994, that agriculture was first included on a similar basis as other sectors. The main result of the negotiations, tariffication of non-tariff restrictions, reduction in tariffs, and discipline of trade-distorting domestic and export subsidies, can be considered a first initial step toward global free trade in agriculture. Still, we are far away from obtaining in this sector trade conditions anything similar to those actually in practice in the non-agriculture products.

Did regionalism perform better in terms of liberalizing agriculture? And how this preferential agreement affected welfare of the involved countries as well as world-wide welfare? Agricultural liberalization within regional agreements was in the past (say up to 1980), similar to the one of multilateralism, very limited with the possible one exception of the European Economic Cooperation Agreement (1957). In contrast, most RTAs formed in the last ten to fifteen years included agriculture in the removal of internal trade barriers. The degree of inclusion and the depth of liberalization they reached in each case vary significantly (see Sheffield [1998]). Still we can fairly say that most of them go beyond what has been reached in the multilateral arena. For example, the Closer Economic Relations Agreement (CER) signed between Australia and New Zealand in 1983 reached free trade in agriculture; in the Western hemisphere, the CUSTA agreement between US and Canada signed in 1989 also eliminated tariffs in most agriculture products (more on this below); similarly the Mercosur accord, signed between Argentina, Brazil, Paraguay and Uruguay, has removed all tariff and non tariff trade barriers between members with the exception of sugar.

The question regarding how these regional agreements have affected world-wide welfare can be decomposed in two issues. First, we have the more narrow assessment regarding whether this preferential agreement has caused a strong inward bias in trade flows in agriculture, that is, if they have significantly deviated trade from the rest of the world. Second, whether these agreements have been "stumbling blocs" in the path toward world-wide free trade in agriculture.

Regarding the first point the evidence shows (see Vollrath [1998]) that with the notable exception of the EU, none of the most relevant regional trade agreements (i.e. CER, CUSTA, Mercosur) diverted agricultural trade at the sectoral level. With respect to the second point, most countries belonging to these agreements have had a strong activity within GATT for more open trade in agriculture (see for example the CAIRNS group encompassing CUSTA, Mercosur and CER countries). Again, the major exception has been the EU. It is widely recognized (see Sheffield [1998]) that the creation of the EEC in 1957 proved to be a main impediment to greater agriculture liberalization in the Dillon (1961-1962) and Kennedy (1964-1967) rounds. This situation repeated itself in the more recent UR, which almost collapsed at the beginning of the 1990s because of the strong opposition of the EU to make higher commitments regarding agriculture. Indeed, the proliferation of FTAs that we observed in the nineties was in part a response to the perception of a weak multilateral instance.

In the next section we will analyze to extent to which the NAFTA agreement implemented in 1994 has gone further, compared to UR commitments, in liberalizing agriculture.

A. NAFTA Provisions for Agriculture

In May 1990, and in a context where UR negotiations were stalled, Mexico proposed the US to negotiate an FTA. The negotiations were expanded to include Canada in 1991. An initial trilateral agreement was reached in August 1992 and signed by the three Presidents in December. With the coming of President Clinton to the US administration in early 1993, new supplementary side agreements were negotiated in order to clarify and strengthen the initial provision of NAFTA with respect to environmental protection, labor rights and a mechanism to protect domestic producers from unanticipated, sudden surges in imports. Congress finally approved these side agreements and the implementing legislation in November 1993 and NAFTA came into effect in January 1994.

Regarding agriculture, the NAFTA accord is composed basically of three bilateral agreements among US, Canada and Mexico. It incorporates the Canadian-US free trade agreement (CUSTA) implemented in January 1989 and adds bilateral accords between United States and Mexico, and Canada and Mexico. NAFTA's treatment of agriculture is comprehensive and, with few exceptions, provides for the eventual full liberalization of agricultural trade in the region. In addition to tariff and quotas, NAFTA addressed export subsidies, import safeguards, rules of origin, and sanitary and phytosanitary (SPS) requirements.

Market Access

Between the United States and Canada, tariff on most agriculture products were phased out over a 10-year period, and were completely eliminated by January 1, 1998. Still there were exceptions to bilateral free trade. In particular, as already agreed under the CUSTA, NAFTA allows Canada to maintain permanent restrictions on imports of dairy, poultry and eggs from the United States, while US maintained restrictions on imports of sugar, dairy and peanuts from Canada. These restrictions, originally specified as quotas, were later redefined as tariff rate quotas (TRQ) to comply with WTO rules.

The bilateral agreement liberalizing agriculture trade between United States and Mexico left no commodity out of the process of tariff and non-tariff barrier elimination. A key ingredient in this result was the early decision taken by the Mexican authorities to include its politically sensitive corn sector, leaving little room for other exclusions (Orden [1996]). The bilateral agreement called for the elimination or phase out of existing tariffs. For 56% of pre-NAFTA trade, tariffs were eliminated immediately or have a phase-out period of five years. An additional 23% of the pre-NAFTA trade was subject to longer adjustment periods between 5 and 15 years.

Regarding existing quotas, licenses and other quantitative restrictions, NAFTA stipulated that all of them should be converted into TRQ. For imports above the TRQ, over-quota tariffs were set to provide initial protection equivalent to the previous non-tariff measures. The over-quota tariffs were completely phased out over adjustment periods of 10 or, in some cases 15 years. Over 21% of the pre-NAFTA trade was subject to this type of mechanism. It is clear that sectors receiving this treatment were among the most sensitive for both countries and in the short and medium term the level of liberalization agreed upon was not significant. Market access under the TRQ was based upon trade levels observed in 1989-1991 and were scheduled to increase only at a 3% percent annually. Initially this was the only way to increase exports of these goods to the partner country as the over-

quota tariffs were quite high: in the case of Mexico over-quota rates were 215% for corn and 260% for chicken. In the US, cheese faced an over-quota rate of 70% while it was 125% for peanuts.

Another sensitive sector that received a special adjustment mechanism during the transition to free trade was sugar. First, the TRQ was fixed at 25,000 metric tons during the first 7 years of the agreement. After the seventh year Mexico would gain market access to the US market only if it became a "surplus sugar country" based on the difference between production and consumption, with unlimited access to its surplus if it became a surplus region for two consecutive years. Meanwhile, the US TRQ for sugar was going to be reduced over a 15-year period.

Frozen concentrated orange juice was also a sensitive product. Though before NAFTA it was subject only to tariff barriers, the negotiators agreed to establish a TRQ. The in-quota tariff was set at half of the MFN level. The over-quota tariff was set initially at the MFN level and then reduced 15% over a six year period, then stayed constant for four years, and finally it was going to be phased out over the remaining five years.

A special mechanism was also established for horticultural products. This consisted of a safeguard provision for seasonal imports entering the US market. These products (i.e. tomatoes, peppers, onions, etc.) were to have a TRQ with a 10-years lapse of adjustment but the over-quota tariffs were held at MNF levels during the whole period and then eliminated in one step at the end.

Finally, there was an emergency action provision that was going to be applied for any agricultural good during the transition. Under this provision, a scheduled tariff reduction was going to be suspended and the MNF tariff reestablished for up to 4 years if imports have become or threatened to become a substantial cause of injury to a domestic industry. This emergency action was limited to a single application for any commodity.

In the Canada-Mexico agreement, Canada accorded Mexico the same treatment as the United States under CUSTA. Thus, Canada continued to establish import restrictions on dairy, poultry and eggs. Mexico specified long phased-out periods for the same commodities as agreed upon in the Mexico-US Agreement. As a reciprocal measure on the permanent measures of protection imposed by Canada, Mexico retained its import protection for those goods that in Canada were subject to supply-managed programs: poultry, dairy and eggs.

Domestic Support and Export Subsidies

The NAFTA agreement imposes no direct restriction on the domestic support programs each member country applies to its agriculture sector, though it emphasizes countries should respect and comply with compromises taken in this area at the multilateral level (GATT). In spite of this "free hand" approach, domestic support programs have been subject to significant changes in the NAFTA countries since 1994 (see Burfisher, *et al.* [1998]). In general, domestic reforms implemented in each country have lowered the support levels and "decoupled" payments by making them independent of farmer production decisions or market conditions. Clearly, these reforms were in part motivated by the commitments adopted at the Uruguay Round which encouraged countries to adopt this decoupling mechanism plus a pledge for a 20% reduction in domestic support programs over the 1994-2000 period.

But, beyond the multilateral compromises, did NAFTA *per se* play any role in giving countries greater incentives to adopt these reform policies? The evidence presented in Burfisher, *et al.* [1998] seems to suggest that this is so. In particular, free regional trade in agriculture effectively limits the ability of NAFTA members to maintain independent farm programs because the pressures of market arbitrage tend to unify prices. Thus, this market forces make price support programs and other supply managed mechanisms more expensive and less effective for the governments.

For example, the Mexican government, in anticipation of the price reduction effect that NAFTA will have on agriculture prices, corn in particular, launched in October 1993 the PROCAMPO program. This was a 15-year, direct payment scheme that compensated producers for the loss of input subsidies, price support and import protection. The idea was to provide transitional, mostly decoupled income support to farmers while at the same time allow Mexico's agriculture to undergo a structural change in response to market conditions. On the other hand, Canada's refusal to liberalize trade in poultry, dairy and eggs was associated to the political decision to maintain price support and production associated subsidies to these sectors. These programs need to be completed with trade restrictions in order to make them more effective.

Regarding export subsidies, the CUSTA prohibits its use in the case of bilateral trade between US and Canada. Still, under NAFTA, that is, for the bilateral trade between US and Mexico and between Canada and Mexico, export subsidies are permitted if the importing country agree to them, or the importer country is benefiting from imports subject to subsidies from third countries. The agreement establishes a series of consultation procedures and a working group on agriculture subsidies in order to set objective limits, monitor and evaluate the effect of export subsidies in the regional market.

B. The Political Economy of Agriculture Protection in US and NAFTA

Was the NAFTA liberalization of agriculture trade barriers significant? It certainly seems to be the case if we compare the results with what ended up to be the compromises at the UR. At that forum countries committed to convert into tariff rate quotas all existing quotas and licenses, but with almost no changes in market access, and very moderate reductions in the levels of over-quota tariffs (a 36% cut applied to a very inflated initial level). This contrast had led some analysts to be very optimistic about the NAFTA results (see Hufbauer and Schott [1993]). Certainly, in the case of the Mexico-US bilateral agreement, the fact that there was no permanent exclusion was a quite remarkable result.

Still, from another perspective, it can be said that if US maintained previous to the agreement very low, non-discriminatory (MFN) barriers to trade in agriculture then the indicated elimination in tariff and non-tariff barriers within NAFTA was not that remarkable. The information described in Table 26 suggests that in a number of agriculture products that has not been the case. This table presents information on the level of support provided by domestic farm programs and the protection provided by trade policies. Column 1 shows the Producer Subsidy Equivalent estimated for year 1991 (as % of farm income); Column 2 and 3 present estimates of border protection, including the existing tariff (Column 2) at the beginning of the NAFTA negotiations and also an estimation of the tariff equivalence of quantitative barriers (calculated as the difference between domestic and world prices).

TABLE 26
SUPPORT AND PROTECTION LEVELS AMONG COMMODITIES IN US BEFORE NAFTA

Commodity	Producer Subsidy Equivalent % of Domestic Prices, 1991	Border Protection	
		1991 Tariffs	Tariff Equivalents
<i>Grains and oilseeds</i>			
Barely	50.8	2.5	3.0
Corn	16.8	0.6	2.0
Oats	14.9	0.0	0.0
Rice	39.7	6.5	8.0
Sorghum	18.4	7.0	7.0
Wheat	53.6	3.7	6.0
Durum wheat		0.0	0.0
Soybeans	16.5	0.0	0.0
Meal		5.0	5.0
Oil		22.5	22.5
Other edible oils		18.5	18.5
<i>Livestock and poultry</i>			
Beef	7	5.0	31.1
Pork	5.9	5.0	2.0
Poultry	7.3	15.0	16.3
<i>Section 22 commodities</i>			
Dairy	40.5		
Butter		15.0	95.7
Cheese		20.0	69.5
Nonfat dry milk		5.6	83.1
Cotton		5.0	26.0
Peanuts			
Shelled		16.1	186.1
Unshelled		5.8	123.1
Peanut Butter		5.0	126
Sugar	52.5	TRQs	83.7
Sugar containing products			120.3
<i>Horticultural</i>			
Orange juice (frozen)		25.0-30.0	25.0-30.0
<i>Fruits and vegetables</i>			
Cumbers		20.0-30.0	20.0-30.0
Melons		10.0-20.0	10.0-20.0
Onions		5.0-10.0	5.0-10.0
Peppers		5.0-10.0	5.0-10.0
Tomatoes		5.0-10.0	5.0-10.0

Source: Orden [1996].

We see that grains and oilseed products have been in general subject to lower border protection, but some of them have received significant support from domestic farm programs. This has been specially the case for wheat, rice and barley with PSE equivalent estimates equal to 53%, 40% and 50%, respectively. Within livestock and poultry, beef has not received significant direct support

through farm programs though the presence of quantitative import restrictions have implied a relative high level of border protection (31% implicit tariffs). The presence of quotas has also been significant for dairy, peanuts, and sugar as suggested by the high levels of tariff equivalent estimates (i.e. 95.7% for butter; 70% for cheese, 186% for shelled peanuts, 120% for sugar containing products) and their differences with existing applied tariffs. Some of these products also received a significant level of direct farm support as indicated by the levels of PSE (40% dairy, sugar 52%). Contrastingly, Horticultural products were not subject, in 1991, neither to significant government subsidies nor quantitative border restrictions. Protection was provided by tariffs, which in general have not been very high with the exception of orange juice (with a 25%-30% rate).

What explains these levels of protection? It is now common to attribute the structure of protection across sectors to a "political economy equilibrium" where, in setting trade and support policies, governments take into account both the interest of the involved sectors and also that of the general society, basically those of the consumers (see Grossman and Helpman [1994]). How much the final equilibrium benefits the producer interest against those of the society as a whole depends on how efficient are the producers in terms of organizing themselves into lobbies (to solve the coordination problem of, for example, campaign contributions), on how much losses or gains are at stake at the sectoral level (usually measured by the import/export to domestic production ratio) and by the price elasticity of demand for the involved product (an indirect measure of how much consumer welfare is lost by imposing tariff or other border protection).

This framework has already been used to empirically investigate the determinant of MFN protection in US. Goldberg and Maggi [1999] and Gawande and Bandyopadhyay [2000] provide empirical support using mainly manufactured goods. For the specific case of agriculture, Gardner [1987] found that government support raises systematically across commodities when elasticities of supply and demand were low and a larger share of output was imported or exported. Conditional on these variables, factors that facilitated political organization by a sector were also significant.

As indicated by Orden [1996], the above findings are consistent with the pattern of protection described in Table 18. In this sense among the exported commodities, levels of support (through subsidies) are positively correlated with export dependence. Besides this, the high level of support obtained by wheat and barley producers may be explained by the lack of alternative production opportunities (inelastic supply) in the dryer parts of the MidWestern grain belt where these commodities are produced. On the other hand, the level of intervention is higher for the moderate number of farms producing grains or dairy than for either the larger number of farms producing beef cattle or the relative small number producing cattle on feedlots, poultry and eggs, cotton, or vegetables and melons.

But then, given the above described political equilibrium behind trade protection in agriculture, why is it that NAFTA was successful in liberalizing US agriculture at the regional scale? How did NAFTA negotiation help to change the political incentives toward protectionism in agriculture? Beyond the special reasons (i.e. other non-economic objectives) that the US may have had to push NAFTA, issue that will be discussed later on, there is already a well-established theory that tries to explain the surge of FTAs. This is the so-called political economy explanation of Free

Trade Agreement. The seminal work in this area is also associated with Grossman and Helpman [1995] (GH95).

According to this approach, at the heart of whether to form an FTA are political pressures for and against the FTA by the potential losers and winners due to trade creation and trade diversion. GH95 use the term "enhanced protection" to describe trade diversion and "reduce protection" for trade creation (relative to the tariff-ridden pre-FTA situation).

In few words the GH95 approach suggests that exporting interests that are expected to gain the most from trade diversion in the partner country market are those that will be more in favour of an FTA. At the same time those import competing sectors that are expected to suffer the most from trade creation originated in imports from the partner country are the ones who most vividly will oppose the formation of an FTA. The final result will depend also on how efficient are these different groups in influencing government policy through lobby activity, and also the weight in the government objective function of the consumer welfare *vis-à-vis* that of the producer groups.

To what extent does the above approach explain the surge of NAFTA? Can we apply this logic to understand the free trade result in agriculture between say US and Mexico? Alternatively, is NAFTA the outcome of very special circumstances, which can hardly be translated to an eventual US-Mercosur negotiation? In what follows we discuss the plausibility of the GH95 explanation, while the second issue is discussed in the next subsection.

For the GH model to be a reasonable explanation of the results of NAFTA we have to find that the gains obtained by US agriculture export interests, benefiting from trade diversion in the Mexican market, more than compensated the losses taken by US import competing activities due to the decline in domestic production and in prices. How these economic gains and losses were translated into lobbying in favor or against NAFTA by these interest groups?

Orden [1996] provides very useful information to address the above question. In particular, it offers a detailed account of the agriculture provisions negotiation process, especially for the case of the Mexico-US bilateral treaty, describing how the different agriculture groups influenced the final results. We are interested in highlighting how, once the high level decision was taken to achieve free trade in agriculture with no exclusion, the US government managed the negotiation to maximize export interest support and minimize the opposition from import competing sectors.

In the US the domestic political process provided multiple points of access for interest groups to influence specific provisions of the agreement. The agriculture producer groups were faced with either seeking concessions related to the parameters of adjustment mechanisms or simply opposing the agreement. Table 27 taken from Orden [1996] shows the summary of economic stakes by agriculture sector and their lobby activity in the negotiations. As we would have expected, and predicted by the GH95 theory, there is a high correlation (most sectors are located in the diagonal of the table) between potential economic losses (gains) and political opposition (support).

TABLE 27
SUMMARY OF THE ECONOMIC STAKES AND THE ACTIVITIES OF INTEREST GROUPS

Economic Stakes	Activity level			
	Strong Support	Support	Opposition	Strong Opposition
Positive	Corn Livestock			
Modestly Positive	Processing Industries	Freed grains Oilseeds Diary Cotton		Wheat
Modestly negative				Sugar Peanuts Florida fruits and Vegetables

Source: Orden [1996].

Thus the export-oriented interests represented by the Corn, Livestock, and Processing Food industries were in favour of the accord and actively support it. This was also the case with Feed Grains and Oilseed producers. On the other extreme, import competing sectors like sugar, peanuts and Florida growers of fruit and vegetables showed a strong opposition. One sector that seems not to correspond with theory is wheat. As we see, in spite of being a sector that potentially could benefit from higher export access into the Mexican market, it strongly opposed the agreement. In this case, the opposition was not based upon issues related to the Mexican-US agreement *per se*. Instead this group withheld support in a effort to obtain leverage for negotiating market access issues in the Canadian market. In particular they wanted to discipline the Canadian Wheat Board pricing system and wheat transportation subsidies.

But then, how was that, in spite of some strong opposition, a majority bipartisan vote was obtained on November 17th on NAFTA implementing legislation? Were any last moment concessions in favour of those sectors in which eventually trade creation (reduced protection) would occur as a consequence of NAFTA implementation? As indicated by Orden [1996] there was a last minute bargaining to assure the majority voting. Nevertheless, on the whole they do not imply a greater deviation from the initial plans of obtaining regional free trade after a period of transition, though as we will see some of these concessions in some cases have strengthened the probability that the trade agreement generated welfare losses to member (and specially non-member) countries as a consequence of trade diversion.

Thus, the Sugar industry got that consumption of corn sweeteners were included in the determination of net production surplus and that the Mexican sales of Sugar to the US would be 250,000 tons from the seventh to the fourteenth year. Beyond this, we have already indicated that the US government has agreed that additional sugar imports from Mexico will be included in, no additional to, its global

TRQ commitment. In the case of Citrus producers (mainly from Florida), they got a sort of price-based safeguard which allowed the US to reinstall the prevailing MFN rate on imports from Mexico (for quantities exceeding 70 million gallons annually through 2002 and 90 million in 2003-2007) if the US price of fresh concentrated orange juice dropped below an average based upon the proceeding five years for five consecutive days. More important for third country interest, the Citrus sector got the commitment that US cut of MFN tariff under GATT on fresh and processed citrus products was going to be limited to 15%. Also non-NAFTA citrus juices would be classified as perishable commodities to expedite injury claims.

The vegetable sector was favoured with a series of administrative concessions like an early-warning import surge mechanism, funding for horticultural research projects and also a promise that MFN tariff cuts on tomatoes, peppers, lettuce, cucumbers, celery and sweet corn under GATT will be limited to 15%. The wheat sector got the assurance of bilateral consultations to address transportation subsidies and Canadian Wheat Board pricing practices and an ITC investigation of whether imports from Canada interfered with the domestic wheat program. Finally, the Peanuts producers were helped with the promise of bilateral consultations to address the increase of peanut butter/past from Canada and an ITC investigation of whether imports interfere with domestic peanut program.

C. NAFTA's Lessons for Mercosur Agriculture Exports. The Match Between US Sensitive Sectors and Mercosur Export Supply

Given the trade barriers faced by Mercosur agriculture exports to US described in Chapter II.D and the experience of NAFTA liberalization described above, what are the chances that these products can be liberalized in an FTA between US and Mercosur? Are the agriculture products that are at the top of Mercosur list "sensitive" from a point of view of the US domestic producers? More generally, can the indicated experience of Mexico and Canada of an almost non-exclusion and deep agriculture liberalization with US be extrapolated to the case of an hypothetical negotiation between US and Mercosur?

A starting point to evaluate these questions could be to measure how "similar" are Mercosur countries to Canada and Mexico from the point of view of their agriculture export supply to the US market. If we find evidence of high degree of similarity we could expect that the same issues arising within the NAFTA negotiations will arise in an eventual Mercosur-US agreement, and then NAFTA is a good starting point to think about Mercosur prospects in the US market. We evaluate this by computing the Kreinin and Finger "similarity" index (SI) and the Spearman correlation coefficient between the structures of exports between pairs of countries. The first index takes values between 0 and 100 while the second goes between -1 and 1. We apply these calculations both to 6-digits and 8-digits commodity aggregates. The results are presented in Table 28. We observe that for the case of Argentina we have relatively low values of the similarity index both with Canada and Mexico (9 and 10 for six digits products, 8 and 6 for eight digits commodities, respectively). In the case of Brazil, we find also a low value of the index when comparing with the case of Canada (7 and 6), though it is higher with respect to Mexico (16 and 14). Finally in the case of Uruguay the indexes are very low both with respect to Mexico and Canada. This ordering in general coincides with that described by the Spearman indicator.

TABLE 28
SIMILIRATY INDEXES
US Agricultural Imports, Average 1998-2001

	Krein and Finger Index		Spearman Correlation Index	
	6-digit	8-digit	6-digit	8-digit
World/Argentina	24	21	0.17	0.28
World/Brazil	21	20	0.21	0.35
World/Canada	41	38	0.21	0.52
World/Mexico	41	37	0.28	0.47
World/Paraguay	6	5	0.03	0.03
World/Uruguay	12	10	0.04	0.09
Argentina/Brazil	22	18	0.47	0.53
Argentina /Canada	9	8	0.27	0.27
Argentina /Mexico	8	6	0.41	0.34
Argentina /Paraguay	6	6	0.34	0.59
Argentina/Uruguay	24	21	0.46	0.64
Brazil/Canada	7	6	0.27	0.32
Brazil/Mexico	16	14	0.43	0.43
Brazil/Paraguay	9	8	0.24	0.47
Brazil/Uruguay	16	12	0.33	0.51
Canada/Mexico	24	22	0.30	0.34
Canada/Paraguay	2	2	0.06	0.14
Canada/Uruguay	10	9	0.12	0.22
Mexico/Paraguay	2	2	0.13	0.25
Mexico/Uruguay	2	1	0.17	0.27
Paraguay/Uruguay	7	7	0.63	0.82

Source: Own elaboration upon information from USITC TRADE DATAWEB and USHTS.

The above evidence suggests that with the possible exception of Brazil with Mexico, the Mercosur countries have an export structure to US that in general is significantly different from that of USA's NAFTA partners. Thus we might expect that an eventual agriculture negotiation between Mercosur and US will involve a series of new issues, making the NAFTA agriculture provisions less significant as a precedent.

We can use the above similarity indexes to derive conclusions regarding another important negotiation issue. That of whether the interest of the Mercosur countries in the US markets are or not coincident. Table 28 also presents the estimation of the SI and the Spearman correlation coefficient for the structure of exports in the US market among Mercosur countries. As we see the SI is much higher between the Mercosur countries than those between them and Canada and Mexico. Argentina has a SI of 22/18 with Brazil and 24/21 with Uruguay, while this latter country has a SI of 16/12 with Brazil. This higher level of similarity is confirmed by the relatively large and positive values of the correlation coefficient (i.e 0.6 between Argentina and Uruguay). Clearly, this evidence suggests that there is some overlap in the agriculture interest of Mercosur countries in the US market, which may justify a coordinated action (more on this in the next section).

Another way to evaluate the extent of the results of the NAFTA agriculture negotiations as a relevant precedent for Mercosur is to look at the "shopping list" of these countries, and see how these products were treated in the NAFTA negotiations. Were they liberalized? Are they among the most import sensitive products of US?

We have already identified that the list of critical Mercosur products include prominently the following commodities (which face important trade barriers in US): Bovine Meat, Chicken and Turkey Cuts, Powder Milk, Cheeses and Butter, Citrus (including orange) Juice, Sugar, Peanuts and Tobacco.

The description we presented on the NAFTA agriculture negotiations shows that indeed some of the Mercosur key agriculture products were among the most politically sensitive items. This is clearly the case with sugar and sugar containing products. Brazil is a key exporter of these products, even more than Mexico. Recall that sugar was one of the most disputed items in NAFTA and the sugar sector agreed to support NAFTA at a very late stage in the negotiations and only when assurance was made that any additional market access to Mexico will be granted at the expenses of third country origins. This implied a reduction of the quota available for third countries like Mercosur exporters.

Milk and other dairy products, which are key products for Argentina and Uruguay were also sensitive items within NAFTA. In the US-Mexico agreement these products were liberalized within a longer time period (10 to 15 years) and maintained tariff rate quotas during the transition (though the over-quota rate has a declining time path). Let us remember that in the case of the US-Canada provisions, dairy was one of the few sectors excluded from the agreement.

On the other hand, Bovine fresh cuts received a relative liberal treatment within NAFTA, though this could be in part as a result of US being comparatively more efficient in production relative to its neighbours; clearly this could not be the same when US domestic producers face competition from Mercosur countries. Still, increasing access of these products by Mercosur countries may in the short run depend more on Mercosur countries' effort to meet the sanitary (foot and mouth disease, etc.) and taste exigencies (grain fed meat) of the US market.

Citrus (oranges and lemons) are, as indicated, key products for Mercosur countries (oranges for Uruguay, lemons for Argentina). On the other hand, Brazil is a world-wide exporter of frozen concentrate orange juice. These were also very sensitive items for US within the NAFTA negotiations. A tariff rate quota was set for orange juice which was eliminated only after a 15-year time period and a price-based safeguard was established during the transition in case the domestic price in US fell below a certain value.

Finally, horticultural products, like onions and garlic (key products in the case of Argentina), were also subject to a 10-year period of adjustment within NAFTA and market access in the transition was also regulated through a TRQ. In addition, these products were subject to a seasonal safeguard provision; this last measure, nevertheless, would be less important for Mercosur countries given the off-seasonal character of its production pattern compared to US.

In spite of these transitory measures of protection applied to these import sensitive products, we have already indicated that NAFTA (at least in the Mexico-US provisions) was successful in assuring free

trade in these agriculture items in the long run. Can we expect the same to happen with Mercosur countries? Though at this point we can only speculate about this, we suspect that there are reasons, some of them going beyond specific trade issues, which make Mercosur countries not similar to Mexico and Canada from the point of view of US domestic politics.

A key issue is, of course, the condition of bordering state, which has a quite important bearing in the political decision of US to reduce the weight of border protection on trade flows with its frontier economies. Several authors (see, for example, Mayer [1998]) have pointed out that issues associated with migration, internal security, defense; etc. have been quite important in the decision of the US government to pursue an FTA with Canada and Mexico and this may have compensated possible sector specific losses from trade liberalization. Clearly, these other non-trade reasons are not as important in the case of Mercosur countries and as a consequence will reduce the impulse of US authorities to pursue such negotiations.

But better than speculating on why Mercosur may not face the same political will to negotiate agriculture compared to US's NAFTA partners, we can infer the relative importance of this by taking a closer look at recent trade legislation that the US government has issued. We do this in the next section.

IV. MERCOSUR-US NEGOTIATIONS IN AGRICULTURE: POTENTIAL SCENARIOS AND OUTCOMES

In the previous section, we concluded that the experience of NAFTA with regard to agriculture liberalization is not entirely a good, updated precedent of what Mercosur may obtain in a hypothetical negotiation with US. What other pieces of information can we look at to infer the current US position toward agriculture liberalization? We will look at two legislative initiatives approved by the US Congress: (a) the "Fast Track" (FT) legislation; (b) the "Farm Bill" (FB).

After this analysis we will informally discuss what might be the potential negotiating scenarios that are open to Mercosur countries when pursuing agriculture liberalization with the US. The questions we will address are: Should Mercosur countries seek individual agreements with US? Should negotiations be arranged as Mercosur and US? Does the FTAA meet some of the demands Mercosur countries have on agriculture liberalization?

A. The FT Legislation

The US Congress has already approved two FT initiatives. The House passed one in December 2001, and the Senate approved another in May 2002. The analysis of both projects provides evidence regarding the political will of US Congress toward agriculture liberalization. The FT legislation has direct bearing with respect to any multilateral and regional agreement that US may enter during 2002-2007. In particular, it applies to multilateral negotiations within the WTO, the bilateral agreement with Chile and Singapore and finally the regional negotiations for constituting the FTAA (see section 6 [a] FT).

The House legislation has included a general limitation for tariff reduction to be achieved under a multilateral scheme. Tariff cuts cannot go beyond 50% of the existing tariffs (section 3 [a] [2] [A] FT). The legislation, nevertheless, does not impose any additional limitation to agriculture liberalization *per se*, though it states that negotiations in this area should aim at obtaining reciprocal tariff and non-tariff barrier elimination and provide a reasonable adjustment period for import sensitive agriculture products. With regard to these last products, the legislation also establishes that the authorities, in close consultation with Congress, must determine whether any further liberalization is adequate taking into account the consequence of a previous agreement, specifically NAFTA (see section 2 [10], section 4 [b] FT). Still no formal definition of what constitutes an agriculture import sensitive item is provided.

The project approved by the Senate goes one step further by defining this critical issue and also by incorporating specific limitations for tariff reduction in agriculture. With regard to the first point, import sensitive items were defined as those for which as a result of the UR agreement: (i) the rate of duty was subject to a tariff reduction in 1995-2001; (ii) became subject to a tariff rate quota after January 1995 (section 2113 [5] FT). With respect to the second point, the legislation does not allow any further tariff reduction, beyond those agreed upon the UR, in any import sensitive agriculture product (section 2103 [a] [2] [1] [B] FT).

This limitation, nevertheless, could be waived if: (i) such reductions are included within an implementing bill; (ii) if such reductions are set forth in a negotiation for the reciprocal elimination of duties under the auspices of the WTO (section 2103 [a] [2] [5] and [6] FT). So the legislation does permit "deep" agriculture liberalization but only within the context of bilateral (or regional) Free Trade Agreements where the reciprocity condition is assured. At the same time gives more power to Congress to determine such cuts by establishing that an additional implementing law is required to approve these changes.

The more restrictive character of the Senate project is also reflected in the fact that it explicitly indicates that the US trade authorities must avoid agreements that lessen the effectiveness of domestic and international antidumping, subsidies and safeguard provisions. This has direct consequences regarding the possibility of effectively liberalizing agriculture, given the significant role these mechanisms have played in agriculture trade. Finally, the Senate project is more explicit regarding the process of special consultations that should be applied on import sensitive agriculture products (section 2104 [b] 2 FT). It establishes that before negotiating any tariff reduction in the context of the FTAA or a WTO Multilateral Round, the USTR should: (i) consult with Congress whether further reductions are appropriate; (ii) request an assessment by the ITC on consequences of any further tariff reduction.

Overall, we can conclude that the FT legislation does impose new restrictions to achieve further liberalization in agriculture, especially within the context of a multilateral and a continental scheme (FTAA). Still, if anything, it tilts the remaining possibilities toward less comprehensive (in terms of the involved countries) bilateral or regional free trade agreements in which US exporters can benefit from reciprocal market access gains.

B. The Farm Bill

A complementary piece of information that also serves to describe the stance toward agriculture liberalization of the US government is the FB. The approval of the indicated legislation generated great controversy given that some press commentators have argued that it has "monstrously" raised domestic support (see *The Economist* [2002]). In this sense it may be interpreted as a signal of a weak instance of US regarding global liberalization in agriculture. The discussion we present below about this legislation tries to answer two questions. First, to what extent does the new law imply a break with the path toward more rational management of these programs agreed upon at the UR negotiations? Second, and more directly related to the purpose of this paper, why in the FB relevant from the point of view of Mercosur's objective of gaining access to the US import markets of agriculture products?

Regarding the first question, the FB of 2002 replaces the legislation that was passed in 1996, which implemented the UR agreements up to year 2001. That legislation started with the process of creating subsidies that de-couples payments from current production and prices (the Facility Contract Program) and also stipulated an overall compromise for a reduction in total domestic support from the base year (1986-1988). The actual behavior of direct government payments to farmers was that they increased dramatically since 1998 as a consequence of low commodity prices. Thus, the average of payments per year in 1999-2001 were above US\$ 20 billion (with the record

high in 2000 of US\$ 22.1 billion). Much of the additional funds to farmers in those years were channelled through *ad hoc* emergency assistance, which was enacted through 5 legislative packages since 1998. The remaining of the additional funds were given through the Marketing Loans Deficiency and Marketing Loan Gains programs whose payments are very sensitive to current prices. These additional expenditures more than offset the observed reduction of de-coupled support during the 1996-2001 period.

The FB of 2002 basically does three things: (a) maintains and extends (to soybeans and peanuts) the decouple payment programs, now called Fixed Direct Payments. Under this scheme the funds received by the producer depend on production decisions made in 1998-2001 and the payment rate is fixed already in the law; (b) replace all the *ad hoc* emergency assistance support by a new program called Counter Cyclical Income Support Payments. These payments are based upon historical production, though it is somewhat distorting as the final income received depends on the difference between the targeted prices and current prices; (c) it extends the Marketing Assistance Loans (and Marketing Loans Deficiency Payments) to new products (peanuts, mohair, wool and honey), fixing the loan rates in the legislation. This is the most distorting program of all as payments depend not only on current prices but also on current production decisions.⁴

Besides the above changes, the legislation also extended the coverage of the Land Retirement Program (an increase of 11% out of a total of 39 million acres), raising conservation expenditures of about 3 billion dollars over a 10-year period. The effect of this change could potentially help to reduce commodity supply and support commodity prices, though in practice the final effect will be modest as the additional acres to be retired represent only 2% of the total harvested cropland (see Westcott, *et al.* [2002]).

Finally, the FB included specific schemes for dairy and peanuts (recall these are key commodities for Argentina and Uruguay). With respect to dairy, there is a support purchase program where the government buys at support prices milk, butter, cheddar cheese and non-fat dry milk. This is complemented with a dairy export incentive program that pays exporters a bonus when they buy US products and export them when international prices are below domestic prices. This program is subject to WTO restrictions agreed upon the UR agreement. On the other hand, the peanut program has been greatly redesigned in the 2002 legislation by incorporating this crop to the general form of support applied to other crops.⁵

⁴ It allows the producer to receive a loan from the government at a commodity specific rate and pledge production as collateral. The farmer may pay the loan at maturity in three alternative ways: at a very low interest rate, by forfeiting the pledge crop, or at an alternative repayment loan rate. When current prices of crops decline this last repayment rate also declines (in general equals the local posted county prices) so the repayment rate is significantly lower than the original loan rate. Thus, these programs create incentives to produce specific crops, especially those that prices have fallen the most. Estimates produced by the Economic Research Service of USDA (see Westcott, *et al.* [2002]) have calculated that with marketing loan benefits ranging from around 5 billion to over 8 billion between 1999 to 2001, total acreage planted in the eight major field crops has increased in a range of 2-4 million acres annually.

⁵ Before, production for domestic consumption was limited to an annually established quota designed to uphold prices to 610 per ton. Under the new legislation the marketing quota system is eliminated and peanuts are treated similarly to other program crops. Thus, farmers no longer have to have to own or rent a quota rights to produce. Compensation is provided to quota holders for the elimination of the quota system.

Overall, it has been estimated (see Westcott, *et al.* [2002]) that the implementation of these entire support programs will imply government funding of about US\$ 179 billion during the next 10 years (2002-11). This amount represents an increase of US\$ 72 billion with respect to what would be spent if the basic framework of the 1996 Farm Act were to be applied. Thus, in this sense, the new legislation raises the total amount of subsidies. But, this is not a fair comparison given that it does not incorporate the actual value of support given in the last three years which, as indicated, was around US\$ 20 billion per year. So, taking into account this information, the FB consolidates a (great) part of the *ad hoc* support received recently by the farm sector.

However, what is important is not so much the amount received but the effect of these resources on domestic production and exports. Here the news brought by the FB are mixed. The de-couple schemes are extended to other products replacing more distorting regimes (i.e Peanuts), but at the same time maintains and extends to new products the much distorting Marketing Assistance Loans Programs, raising in some cases the loans rates. Thus, the key objective for subsidy-free countries, like Mercosur, is to ask for a process where de-couple mechanisms gain participation within total support.

Going now to the issue of the relevance of the FB for Mercosur countries access to the US market, we think that the FB is important because there is a complementarity between border protection and domestic support, which we already saw played some role in the case of NAFTA. The key issue is that when domestic support is aimed at maintaining current domestic prices and is not decoupled from current production, the reduction in border barriers will imply an increasing amount of government support triggered by declining internal prices. In this situation, we would expect that the decision to liberalize a given agriculture sector will be also accompanied by a change in its support scheme, in case it is incompatible with the reduction in border barriers. We already saw this in the case of NAFTA, when Mexico changed its support regime toward corn in view of increasing competition from US as a consequence of NAFTA. On the contrary, Canada pressured to exclude dairy from the NAFTA agreement because this was inconsistent with its domestic programs aiming at maintaining domestic prices.

What are the good or bad news that the FB brings in this respect? We see that most of the support payments in the FB are not directed to maintain domestic prices (though they do try to maintain farmer is come). As a consequence, domestic prices, especially for grains, have in general been equalized with international prices. The good news for Mercosur (especially Argentina) comes from the fact that the new legislation has changed the support to the Peanut sector, which in the past had the objective of maintaining domestic prices and now takes a similar shape as that of other crops. This will increase the possibility that in the future the US government may decide to lower trade barriers for this product. The bad news comes from dairy. This is because under the new legislation the government support is still oriented at maintaining current prices. Thus, any reform that reduces border protection and as a consequence reduces domestic prices, will imply a significant increase in benefit payments, which in turn will make the program financially not viable. We may take the decision of the Congress (of not changing the support scheme for dairy) as a signal that further liberalization for this product is not "politically" desired.

C. The Prospects for a Mercosur-US Negotiation on Agriculture: Bilateralism, Regionalism and Multilateralism

Given the conclusions we arrive from the NAFTA experience and the above described restrictions coming from the recent legislation approved by Congress, what are the potential negotiating scenarios that are open to Mercosur countries when pursuing agriculture liberalization with the US? Should Mercosur countries seek individual agreements with US? Should negotiations be arranged as Mercosur and US? Does FTAA meet some of the demands Mercosur countries have on agriculture liberalization?

Before discussing negotiating strategies, we may want to recall the main agriculture issues that Mercosur countries have with respect to the US market (the so called "shopping list"). First, we have border barriers for some key agriculture products within which the most important are: Bovine Meat, Chicken and Turkey Cuts, Powder Milk, Cheeses and Butter, Citrus (including orange) Juice, Sugar, Peanuts and Tobacco. Second, we have export subsidies, and third other types of domestic support mainly for those crops which Mercosur countries, mainly Brazil and Argentina, are also major producers (i.e. corn, soybeans, wheat).

Starting with the issue of trade barriers we see that many of the Mercosur key products consist of import sensitive items as defined by the FT legislation. In this sense, these items are subject to tariff rate quotas in US, or, as in the case of citrus and citrus juices, they were subject to tariff cuts under the UR agreement; thus, qualifying as import sensitive commodities. So, is there any way out of these restrictions?

The main issue regarding border barriers is that of reciprocity. As the FT legislation indicates, the key that could open the way for meaningful liberalization in these sensitive products is to assure that US exporters get similar opportunities in the other markets. This seems to have been an important element explaining the successful negotiation obtained by Chile in its recent FTA signed with US. There was no agriculture product that was left outside the FTA and all tariffs and quotas are going to be eliminated at the end of the transition period, which in this case has a maximum of 12 years. Thus, for example, in a very sensitive sector for the U.S. like dairy, Chile got an initial 3,500 tons quota to enter without tariffs. In turn, this quota will rise 7% per year and reach free trade after the 12-year period. Other sensitive products like meat will be completely liberalized after 4 years.⁶

Of course, the above experience of Chile is not easily translated to Mercosur. Indeed, we would expect that the sensitive product category would cover even a larger amount of exports given the greater comparative advantage (with respect to Chile) that Mercosur countries have in agriculture items.

We think at this point that a negotiation strategy in which Mercosur countries negotiate as an entity with US could be productive. The gain from potential market access for US producers will be of significant magnitude, especially when considering the size of the Brazilian market. This could be the only scenario in which US might be willing to significantly reduce border barriers in those agriculture products that, being sensitive for its domestic interests, are at the same time quite

⁶ Overall Chile got a similar treatment in the US market to that of the NAFTA partners (see www.direcon.cl).

critical for Mercosur countries (in the sense that gains from any FTA are substantially reduced if these goods are not included). Having said this, we also need to be realistic. Mercosur countries could not expect to obtain the same treatment as Mexico and Canada. Though the first best is to have outright tariff and non-tariff elimination, a "managed" process where quota levels are progressively raised, even during a long period of adjustment, will also be important as a long-term signal.

Still the negotiation between Mercosur and US should not only concentrate on lifting barriers on these sensitive items. There are also gains from a coordinated action in issues like phytosanitary standards. Today, the certification of these standards is done by domestic agencies, which are not mutually recognized. This originated the establishment of non-automatic import licensing, which have also discriminated Mercosur exports in the US market. This is the case, for example, with Brazil exports of Chicken, which are affected by the fact that Brazil has not certified that its chicken is free of the "New Castle Disease". An FTA framework between US and Mercosur could provide the institutional framework for these types of cooperation to be reached beyond what already has been obtained within the UR framework (which is very little).

Another area where a Mercosur-US framework may also be productive (again compared to UR results) is that of restricting export subsidies for inter-regional trade. The negotiation of this issue within NAFTA was not sensitive and current US position is in favour of a stronger policy in this area. On the other hand, domestic support programs are clearly an item of the global agenda that have to be negotiated at the multilateral level. NAFTA made very little improvements in this respect (other than some unilateral decisions taken by some of the involved countries, like Mexico). More recently, US trade authorities when negotiating with Chile have clearly put the issue aside. Yet Mercosur, given its importance in global agriculture, could trade off market access into US in exchange for a strong international position in favour of a change in the *design* (not so much the *level*) of domestic support with the aim of making these subsidies less prone to affect production and export decisions.

Can the above results be obtained through the current FTAA process? The initial position of US trading authorities regarding agriculture at the FTAA meetings (see Nogués, *et al.* [2001], was to obtain free trade in agriculture products and the elimination of export subsidies. If this were to happen, it would clearly meet the Mercosur's "shopping list". Now the problem is that, as we saw, the FT legislation imposes some restrictions for achieving deep trade liberalization on an FTA basis. Even beyond these institutional restrictions, given the greater number of countries involved, it is quite possible that the actual degree of trade barrier reduction to be achieved through this scheme will be lower compared to a Mercosur-US framework. The key issue here is that the quality of enforcement mechanisms (i.e. dispute settlement bodies) will be weakened when regional integration embraces too many countries with great differences in size and institutional performance. In any case, the development of negotiations both at the FTAA and also at the Mercosur-US level are not necessarily incompatible; some of the provisions reached at the bilateral level will be part of the Free Trade Area of the Americas initiative, while others will be restricted to the Mercosur-US framework as it will happen with NAFTA.

V. CONCLUDING REMARKS

In this paper we have investigated the pattern of agriculture trade of Mercosur countries with US. We have shown that the Mercosur region has significantly lost participation in the US import market in the last 13 years. It is difficult to determine in what proportion this loss in participation occurred as a consequence of trade diversion. Certainly, an important part of the increase in US imports is the result of a process of trade creation that took place within the NAFTA region; Mexico and Canada exports raised as a consequence of reduction in trade barriers. Still, for the case of some specific products, like preparation of vegetable and fruit and meat and its preparation, we do identify that part of Mercosur exports have been diverted away to US NAFTA's partners.

In light of this evidence we try to investigate which are the agriculture products that Mercosur countries are efficient at production and see whether they are subject to tariff and non-tariff barriers in the US market. We conclude that the divergence found for some products between the comparative advantage indicators calculated for the world and for the US market, is in part a consequence of the presence of border barriers in the United States economy. Within this list of key Mercosur products, the ones that face the strongest barriers are Bovine Meat Fresh and Frozen, Chicken and Turkey Cuts, Powder Milk, Cheeses and Butter, Citrus (including orange) Juice, Sugar, Peanuts and Tobacco. On the other hand, grains like Corn, Sunflower and Soybeans, as well as oil and other products made out of Soybeans, face very low border protection in US though they are supported by significant direct government payments. Thus, the apparent difficulty of Mercosur exporters (mainly Argentina and Brazil) is due to the fact that US is also a major producer and exporter of these items.

The description we presented of the NAFTA agriculture provisions shows that indeed some of the Mercosur key agriculture products were among the most politically sensitive items. In spite of this, NAFTA, at least in the case of the Mexico-US agreement was successful in assuring free trade in these agriculture items in the long run. The question then arises if the same could happen with Mercosur countries.

Clearly there are very important non-economic reasons that have pushed the US government to establish an FTA with Mexico and Canada. Among them, the most important is the condition of bordering states and how this influences issues associated to migration, internal security and defense. Clearly these other non-trade reasons are not as important in the case of Mercosur countries and as a consequence they will reduce the impulse of US authorities to pursue such negotiations.

We have looked at US Congress legislation for more updated inference about the political will of US to pursue further liberalization in agriculture. We concluded that the Fast Track legislation does impose new restrictions to achieve further liberalization especially within the context of a multilateral and a continental scheme (FTAA). Yet, if anything, it tilts the remaining possibilities toward less comprehensive (in terms of the involved countries) bilateral or regional free trade agreements in which US exporters can benefit from reciprocal market access gains.

On the other hand, the Farm Bill has produced a change in the design of some sector specific schemes (i.e Peanuts) that makes them less inconsistent with trade liberalization. This will increase the possibility that in the future the US government may decide to lower trade barriers for this product. Still, in other cases like Milk the government support is still oriented at maintaining current prices.

We may take the decision of the Congress (of not changing the support scheme for dairy) as a signal that further liberalization for this product is not "politically" desired.

From the analysis of the US legislation, we conclude that the main issue regarding border barriers is that the key that could open the way to meaningful liberalization in the import sensitive agriculture products is reciprocity, that is, to assure that US exporters get similar opportunities in the other markets. We think at this point that a negotiation strategy where Mercosur countries negotiate as an entity with US could be much more productive. The gain from potential market access for US producers will be of significant magnitude, especially when considering the size of the Brazilian market. This could be the only scenario in which US might be willing to significantly reduce border barriers in those agriculture products that, being sensitive for its domestic interests, are at the same time quite critical for Mercosur countries. Having said this, we also need to be realistic. Mercosur countries could not expect to obtain the same treatment as Mexico and Canada. A "managed" process where quota levels are progressively raised even during long periods of adjustment will also be important as a long term signal.

Still, the negotiation between Mercosur and US should not only concentrate on lifting barriers on these sensitive items. There are also gains from a coordinated action in issues like sanitary and phytosanitary standards. Today the certification of these standards is done by domestic agencies, which are not mutually recognized. This originated the establishment of non-automatic import licensing, which have also discriminated Mercosur exports in the US market. An FTA framework between US and Mercosur could bring the necessary institutional cooperation for this type of problem to be reached beyond what already has been obtained within the UR framework (which is very little).

Another area where a Mercosur-US framework may also advance considerably (again compared to UR results) is that of restricting export subsidies for inter-regional trade. NAFTA negotiation of this issue was not sensitive and current US position is in favour of a strongest policy in this area. On the other hand, domestic support schemes are clearly an item of the global agenda that has to be negotiated at the multilateral level. US, when negotiating with Chile, has clearly put the issue out of the agenda. Yet Mercosur, given its importance in global agriculture, could trade off market access into US market in exchange for a strong international position in favour of a change in the *design* (not so much the *level*) of domestic support schemes less prone to affect production and export decisions.

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