# DP 2003/6

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May 2003

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Abstract. The outcome from the negotiations under the Doha Development Agenda in the World Trade Organization (WTO) is still unclear, but it is clear that the chances for the EU sugar regime to escape reform are slim. If the "Cairns Group" Proposal for tariff reduction is implemented in the new WTO round, the EU would need to lower the support price for sugar by 67% or two-thirds. However, if the "Harbinson" Proposal for tariff reduction is implemented, the minimum reduction rate of 45% would require the EU to lower the support price for sugar by 35%. This 35% cut in support price is only 10% more than the 25% percent cut suggested earlier by the EU Commission for reforming the EU sugar regime. On the contrary, the EU could avoid lowering the support price for sugar with at least three conditions, but the chances are very slim: 1) the Uruguay Round formula will be accepted as the reduction method in the new WTO round and the EU can use the minimum reduction rate of 15% for sugar; 2) world sugar prices will recover in the future; and 3) both developed and developing countries are allowed to use the "Special Safeguard Provisions."

Index words: EU, Uruguay Round, new WTO round, sugar, tariffs, Cairns Group.

**Suggested citation:** Huan-Niemi, E. (2003). The reduction of tariffs under the "linear" and "Swiss formula" in the new WTO round: Impacts on the EU sugar regime. MTT Economic Research, Agrifood Research Finland. Discussion Papers 2003/6.

## Introduction

Despite on-going intensive negotiations on the various facets of agricultural support and protection in the World Trade Organisation (WTO), wide differences still remain between the key protagonists over the issue of market access and reduction of import tariffs. One of the key issues is the formula for achieving reductions in agricultural tariff rates, which are generally acknowledged to be too high. The debate is polarising between supporters of the so-called "Swiss formula" for reducing tariffs, and backers of a "linear" approach for bringing import duties down.

Under the "linear" approach, which was adopted in the Uruguay Round, high and low tariffs are both reduced at the same percentage rate, leaving the highest tariffs still at prohibitive levels even after any percentage reduction has been made. The "linear" approach is backed by the European Union (EU), Norway, Switzerland, Japan, Korea, Taiwan, India, and others.

The Swiss formula recognises the wide diversity in the current range of tariffs, from in excess of 100% in some cases to little more than zero in others. The approach, which is broadly supported by the US, the Cairns Group and a number of developing countries, is described as a "harmonising formula" because it narrows the gap between high and low tariffs. Using a "coefficient" mechanism, high starting tariffs are reduced at a faster rate than lower tariffs, thus addressing the issue of tariff "peaks" for certain heavily protected products which has been a particular concern of the Cairns Group. The Cairns Group proposal would give developed countries five years to reduce their tariffs to 25% or lower, with a 50% "down payment" cut made in the first year.

The EU Commission is proposing an overall average tariff reduction of 36% and a minimum reduction per tariff line of 15%, as agreed in the Uruguay Round, and rejected the "Swiss formula" proposed by the Cairns Group for tariff reduction. The problem for the EU is that this will cut high tariffs more than low tariffs, ensuring no individual tariff exceeds 25%. Sensitive products such as sugar will be pressured to go through drastic reforms in order protect its border from massive imports if the "Swiss formula" is implemented in the new WTO round for agriculture.

Meanwhile, the WTO circulated the first draft of "modalities" for further commitments in the new WTO round to WTO member governments in February 2003. The draft focuses on bridging the differences in the agriculture negotiations and searching for the compromises that are necessary for a final agreement. Previously, WTO member governments concentrated on spelling out what they wanted rather than on narrowing the gaps between them. The "modalities" are targets (including numerical targets) that will set the parameters for the final agreement. However, in March 2003, WTO member governments failed to agree on a framework of "modalities" for the future agriculture trade reform, and the deadline for an agreement is postponed to September 2003 at the Fifth WTO Ministerial Conference in Cancun, Mexico. Along with almost all the other negotiations under the Doha Development Agenda, the agriculture talks are scheduled to end by 1 January 2005. This timetable was agreed in November 2001, at the Fourth WTO Ministerial Conference in Doha, Qatar.

## The Linear and Swiss Formulas

In this paper, three different tariff reduction formulas are used for the projections of "border protection" for EU sugar (Table 1). The first formula is the Uruguay Round formula with a "linear" 36% on average and a minimum of 15% reduction in standard tariffs. The second formula is the "Swiss formula" proposed by the Cairns Group with standard tariffs not exceeding 25% after tariff reduction and a 50% "down payment" cut made in the first year. Finally, the third formula is the tariff reduction formula proposed by the WTO or the so-called "Harbinson Proposal" (WTO 2003) with a "linear" 60% on average and a minimum of 45% reduction for tariffs greater than 90% in ad-valorem basis.

TABLE 1: Tariff reduction formulas used in the projections for "border protection"

Uruguay Round formula	$t_1 = [(1 - a) * t_0]$ , where parameter $a = 0.36$ (on				
	average 36% reduction in tariffs) or parameter a =				
	0.15 (with a minimum 15% reduction in tariffs)				
Swiss formula	$t_1 = (a * t_0) / (a + t_0)$ , where parameter $a = 25$ (no				
	individual tariff exceeds 25%)				
Harbinson Proposal formula	$t_1 = [(1 - a) * t_0]$ for all agricultural tariffs greater				
	than 90% in ad-valorem basis, where parameter a =				
	0.60 (on average 60% reduction in tariffs) or				
	parameter $a = 0.45$ (with a minimum 45% reduction)				
	in tariffs)				

The on-going negotiation process in the WTO under the Doha Development Agenda is assumed to be completed by January 2005. Hence, the new WTO round is assumed to begin in marketing year 2005/2006 and end in marketing year 2009/2010, over an assumed five-year implementation period (Table 2).

TABLE 2: Implementation period for the assumed Doha Round

Base Year	Beginning Year	Ending Year	Implementation Period
2004/2005	2005/2006	2009/2010	5 years

The base year for the "linear" reduction of the Uruguay Round and "Harbinson Proposal" formulas is 2004/2005, whereby the applied "specific tariff rate" for raw sugar in 2004/2005 (a continuance of Uruguay Round's final bound rate in marketing year 2000/2001) is further reduced. The base year for the "Swiss formula" reduction is also 2004/2005, but the "specific tariff rate" for raw sugar is converted into ad-valorem equivalent for further tariff reduction.

In the calculations for further tariff reductions, the Uruguay Round and "Harbinson Proposal" formulas for "linear" reduction are applied directly to the EU's specific tariffs for raw sugar. However, under the "Swiss formula" for tariff reductions, the specific tariffs are converted into ad-valorem equivalent. The advalorem equivalent tariff for EU raw sugar is calculated by dividing the final bound tariff rate for raw sugar (EUR 339) with the average world market price for raw sugar from 1995 to 2001 (Table 3). After the conversion, tariffs under the "Swiss formula"

are calculated on the basis of world market price multiplied by the reduced advalorem tariff for the particular marketing year.

TABLE 3: World market prices and EU's ad-valorem tariff equivalent for raw sugar

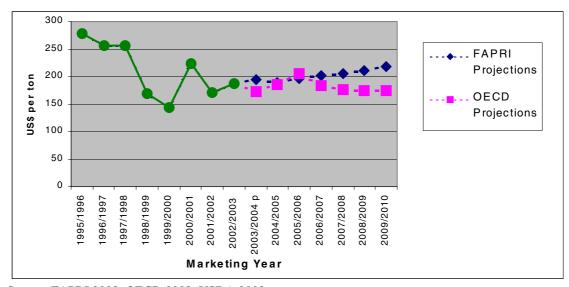
World Market	1995/1996	1996/1997	1997/1998	1998/1999	1999/2000	2000/2001	Average
Price in Euro	214	210	232	152	143	250	200
Ad-valorem equivalent tariff for raw sugar = EUR 339/EUR 200 = 169.50%							

Source: USDA 2003, author's calculations.

# World market prices

Sensitivity towards the fluctuation of world market prices for raw sugar (FOB Caribbean Price/New York No. 11) is considered by using both the Organisation for Economic Co-operation and Development (OECD 2003) and the Food and Agricultural Policy Research Institute (FAPRI 2003) projections of world market prices for raw sugar. Overall, the FAPRI projections are more optimistic compared to the OECD projections for the world prices of raw sugar (Figure 1). The world market prices are given in the form of free on board (FOB), but the projections are calculated on the basis of cost, insurance, & freight (CIF). The cost per ton for insurance and freight can be found from Sugaronline.

FIGURE 1: World market prices for raw sugar form 1995 to 2010



Source: FAPRI 2003, OECD 2003, USDA 2003

# Exchange rate movements and the "Special Safeguard Provisions"

The volatility of the Euro has been high during the past two years (2001 to 2003), moving from one Euro equals to USD 0.80 towards USD 1.20. In year 2001, the "weak Euro" scenario was dominant, but in year 2003 the "strong Euro" scenario is dominant. The projections' sensitivity towards the strength of the Euro is measured

by using two scenarios -- a "weak Euro" scenario (EUR 1 = USD 0.80) and a "strong Euro" scenario (EUR 1 = USD 1.20). Under the scenario of a "strong Euro" (when world market prices are low), projections are made to show the additional border protection provided by the "Special Safeguard Provisions" for sugar. The safeguard duties are calculated according to the specifications given under Article 5.5 of the Uruguay Round Agreement on Agriculture (Appendix A). WTO members are allowed to imposed additional duties automatically when import prices fall below a certain level or if import volumes rise above a certain level by invoking the "Special Safeguard Provisions" as a safeguard measure<sup>1</sup>.

# Projections of border protection under the Linear and Swiss Formulas

The EU has proposed not only to continue the Uruguay Round formula for further tariff reduction, but also to continue the use of the "Special Safeguard Clause" (SSG) or "Special Safeguard Provisions" for both developed and developing countries. Conversely, the Cairns Group has proposed the "Swiss formula" for further tariff reduction and to discontinue the use of the "Special Safeguard Provisions" for developed countries. Furthermore, the Harbinson Proposal also includes the proposition to discontinue the use of the "Special Safeguard Provisions" for developed countries, and only developing countries are allowed to use this safeguard measure. Therefore, the following projections are divided into three different sections: 1) the Uruguay Round formula for further tariff reduction and the "Special Safeguard Provisions" are allowed as a safeguard measure for developed countries; 2) the "Swiss formula" according to the Cairns Group Proposal for further tariff reduction, but developed countries cannot utilise the "Special Safeguard Provisions" as a safeguard measure; and 3) the formula according to the Harbinson Proposal for further tariff reduction, and the "Special Safeguard Provisions" are not allowed as a safeguard measure for developed countries.

# Projections according to the EU Proposal: Uruguay Round formula and "Special Safeguard Provisions"

The EU will lose its border protection for raw sugar in the assumed new WTO round if the standard tariff for EU raw sugar is further reduced by 36% for both "weak Euro" and "strong Euro" scenarios (Appendix B: FIGURE 1). The import price (world market price plus tariff) for raw sugar from the world market will be lower than the intervention price for EU raw sugar (EUR 523). Under the scenario of a "strong Euro," even the additional safeguard duties provided by the "Special"

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<sup>&</sup>lt;sup>1</sup> Safeguard measures are contingency restrictions on imports taken temporarily to deal with special circumstances such as a sudden surge in imports. They normally come under the Safeguards Agreement under GATT 1994, but the Uruguay Round Agreement on Agriculture (URAA) has special provisions on safeguards (under Article 5 of URAA). The "Special Safeguard Provisions" for agriculture differ from normal safeguards under GATT 1994. In agriculture, unlike with normal safeguards: higher safeguards duties can be triggered automatically when import volumes rise above a certain level, or if prices fall below a certain level; and it is not necessary to demonstrate that serious injury is being caused to the domestic industry. Currently, including the EU, 38 WTO members have reserved the right to use the "Special Safeguard Provisions."

Safeguard Provisions" are not enough to provide the border protection for EU raw sugar (Appendix B: FIGURE 2). The intervention price for EU raw sugar has to be lowered if the standard tariff for EU raw sugar is lowered by 36%. Even if the Uruguay Round formula proposed by the EU is accepted in the WTO for further tariff reduction, the EU sugar regime cannot sustain a 36% reduction in tariff without cutting the intervention price for sugar. Though, a 25% cut in the intervention price for raw sugar (earlier suggested by the EU Commission) will be adequate in providing the border protection for EU raw sugar (Appendix B: FIGURE 3). In spite of this, the safeguard duties are needed to provide the border protection for EU raw sugar under the scenario of a "strong Euro" (Appendix B: FIGURE 4).

The projections shown in FIGURE 1 to 4 are using OECD "pessimistic" world market prices for raw sugar. OECD projections are used as the benchmark for world market prices because OECD figures are closer to the current world market prices for raw sugar. The world sugar market is considered by many observers to be one of the most highly distorted commodity markets, and world sugar prices are mostly driven by the level of stocks as a percentage of world sugar consumption. In the last five years, the world market for sugar has been characterised by considerable overproduction and a rising level of stocks. The ratio of stocks as a percentage of world sugar consumption has risen from 36% in 1992/93 to 49% in 2001/02. World stocks are now at a historically high level, which has had the effect of depressing world market prices for sugar. It is reasonable to assume that world sugar prices will remain "under pressure" unless there are major changes in the current structure of the world sugar market.

Both OECD and FAPRI projection for world sugar prices are used in the projections of border protection for sugar. Of course, the border protection is higher when FAPRI figures are used. Nevertheless, there is still a need to lower the intervention price with a further 36% reduction in tariff for EU raw sugar even though the "optimistic" FAPRI figures are used as the benchmark for world market prices (Appendix B: FIGURE 5). However, the EU can avoid cutting the intervention price for raw sugar by choosing the minimum reduction level of 15% under the Uruguay Round formula and using the "optimistic" FAPRI figures for world market prices. Furthermore, additional safeguard duties are needed under the scenario of a "strong Euro" (Appendix B: FIGURE 6). As a result, three conditions are needed to avoid reform (cut in intervention price) in the EU sugar regime and maintain border protection under the new WTO round: 1) the Uruguay Round formula will be accepted as the reduction method in the new WTO round and the EU will be using the minimum reduction rate of 15% for sugar; 2) world sugar prices will recover in the future (at least similar to the levels projected by FAPRI); and 3) both developed and developing countries are allowed to use the "Special Safeguard Provisions."

# Projections according to the Cairns Group Proposal: Swiss formula

The EU will no doubt lose its border protection for raw sugar in the assumed new WTO round if the standard tariff for EU raw sugar is further reduced according to the Cairns Group Proposal by using the "Swiss formula." Moreover, a 25% cut in the intervention price for raw sugar is not sufficient to provide border protection for

both "weak Euro" and "strong Euro" scenarios (Appendix B: FIGURE 7). The intervention price need to be lowered by two-thirds (67%) in order to maintain the border protection for raw sugar (Appendix B: FIGURE 8). In this case, the intervention price for EU raw sugar is very close to the world market price under a "strong Euro," and the intervention price is lower than the world market price under a "weak Euro." Then, the intervention price system is no longer applicable in the EU sugar regime and most probably a "safety net" system would replace the intervention price system.

Under the scenario of a "strong Euro," the EU will have a big problem in maintaining its border protection for sugar because the current EU sugar regime ends in June 2006 (Council 2001) and reform of the sugar regime can only start in marketing year 2006/2007. However, it is assumed that the new WTO round will start in marketing year 2005/2006. Unless the new WTO round will start later than marketing year 2005/2006 or the EU sugar regime is reformed earlier than 2006/2007, it will be extremely difficult for the EU to uphold its border protection for sugar under the reduction formula proposed by the Cairns Group.

# Projections according to the Harbinson Proposal

The EU will certainly lose its border protection for raw sugar in the assumed new WTO round if the standard tariff for EU raw sugar is further reduced by 60% according to the Harbinson Proposal. In addition, a 25% cut in the intervention price for raw sugar is not sufficient to provide border protection for both "weak Euro" and "strong Euro" scenarios (Appendix B: FIGURE 9). In order to maintain the border protection for raw sugar under this reduction percentage, the intervention price need to be lowered by 45% or nearly half.

The EU can also choose the minimum reduction percentage of 45% under the Harbinson Proposal. Similar to the 60% reduction in tariff, the EU will lose its border protection for raw sugar in the assumed new WTO round if the standard tariff for EU raw sugar is further reduced by 45%. Though, the EU will be able to sustain its border protection with a 25% cut in the intervention price for raw sugar under the scenario of a "weak Euro," but incapable of maintaining its border protection under the scenario of a "strong Euro" (Appendix B: FIGURE 10). In this case, the intervention price need to be lowered by 35% in order to maintain the border protection for raw sugar.

# **Conclusions**

The outcome from the negotiations under the Doha Development Agenda is still unclear, but it is clear that the chances for the EU sugar regime to escape reform are slim. Even if the Uruguay Round formula is accepted as the reduction formula in the new WTO round, the minimum reduction rate of 15% may be deleted. WTO members may be able to accept the 36% reduction rate. But, the minimum reduction rate may be rejected because market access may not improve in the new WTO round if there is a possibility to reduce tariff by only 15%.

The chances are very slim, but the EU sugar regime can avoid reform or cut in the intervention price in the new WTO round with at least three conditions: 1) the Uruguay Round formula will be accepted as the reduction method in the new WTO round and the EU can use the minimum reduction rate of 15% for sugar; 2) world sugar prices will recover in the future; and 3) both developed and developing countries are allowed to use the "Special Safeguard Provisions."

If the Cairns Group Proposal for tariff reduction is implemented in the new WTO round, the EU sugar regime will have to go through drastic reforms. The EU is considered to be one of the highest cost producers in the world sugar market. Many of the sugar producers in the EU would not survive reforms that will require a 67% or two-thirds drop in price. The Cairns Group Proposal will most probably end the EU's dominance as a major exporter and producer in the world sugar market, but the EU will still remain as a major importer of sugar in the world market.

If the Harbinson Proposal for tariff reduction is implemented in the new WTO round, the EU may choose the minimum reduction percentage of 45% (instead of 60%) for sugar since sugar is considered as a "sensitive commodity." In this case, the intervention price for sugar is required to be lowered by 35%, which is only 10% more than the 25% percent cut suggested earlier by the EU Commission for reforming the EU sugar regime. Thus, the EU sugar regime may be able to survive a 35% cut in intervention price, contrary to the statement given by the EU agriculture commissioner, Franz Fischler<sup>2</sup>. The EU sugar regime would not come to an end if the Harbinson Proposal is accepted, although the one-third cut in price would be hard to swallow for the high cost sugar producers in the EU.

<sup>&</sup>lt;sup>2</sup> Commissioner Fischler was particularly adamant about the effects of the Harbinson Proposal on the EU's Common Market Organisation (CMO) for sugar, saying it would face certain destruction if the ideas were to be adopted. "If this proposal is supported, the EU's sugar CMO is at an end. Nothing is left," he warned (Agra Europe 2003).

# Appendix A

TABLE 1: Formula for the calculation of additional duties under the "trigger price" stipulation of the Special Safeguard Provisions (Article 5.5 of the Uruguay Round Agreement on Agriculture).

If import price (x) is	Additional safeguard duty				
	Applicable duty	Maximum duty			
x > 0.90 p	nil	nil			
0.90 p > x > 0.60 p	(0.90 p - x) * 0.30	[ (0.90 p - 0.60 p) * 0.30 ] = A			
0.60 p > x > 0.40 p	A + [ (0.60 p - x) * 0.50 ]	A + [ (0.60 p - 0.40 p) * 0.50 ] = B			
0.40 p > x > 0.25 p	B + [ (0.40 p - x) * 0.70 ]	B + [ (0.40 p - 0.25 p) * 0.70 ] = C			
x < 0.25 p	C + [ (0.25 p - x) * 0.90 ]	C + [ 0.25 p * 0.90 ]			

**x** = import price in CIF term

p = trigger price

TABLE 2: Calculation of additional duties on the imports of raw sugar into the EU under the "trigger price" stipulation of the Special Safeguard Provisions.

CN	TRIGGER	If import price is		the additional	If import p	rice is	the additional
CODE	PRICE	less than	but equal	duty is	less than but equal		duty is
	(in Euro)		to or more	(in Euro)		to or more	(in Euro)
17 011 110	418	376.20	250.80	30% of (376.20 - import price)	250.80	-	37.62 + 50% of (250.80 - import price)

CN	TRIGGER	If import price is		the additional	If import price	the additional
CODE	PRICE less than		but equal	duty is	is less than	duty is
	(in Euro)		to or more	(in Euro)		(in Euro)
		167.20	104.50	79.42 + 70% of (167.20 - import price)	104.50	123.31 + 90% of (104.50 - import price)

# Appendix B



FIGURE 1: Uruguay Round formula -- The level of protection for EU raw sugar in the new WTO round after linear 36% reduction in standard tariff. Source: OECD 2003, USDA 2003, Sugaronline, author's calculations.

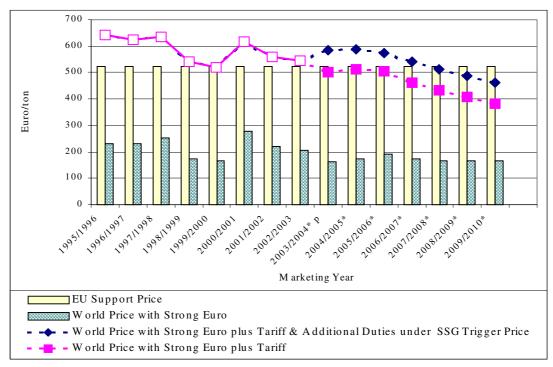


FIGURE 2: Uruguay Round formula and the "Special Safeguard Provisions" (SSG) additional duties imposed -- The level of protection for EU raw sugar in the new WTO round under a strong Euro and after linear 36% reduction in standard tariff. \*Additional duties are calculated from 2003/2004 onwards. Source: OECD 2003, USDA 2003, CEC 1995, Sugaronline, author's calculations.



FIGURE 3: Uruguay Round formula -- The level of protection for EU raw sugar in the new WTO round after linear 36% reduction in standard tariff and a 25% cut in the intervention price for raw sugar in 2006/07. Source: OECD 2003, USDA 2003, Sugaronline, author's calculations.

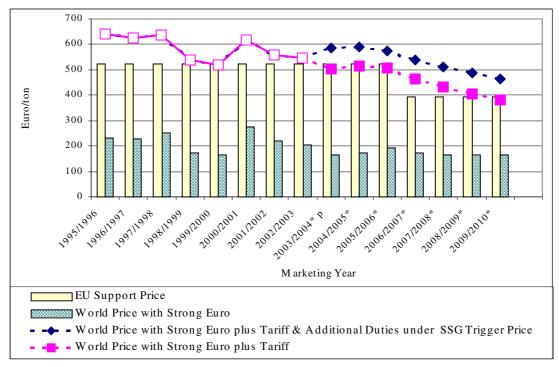


FIGURE 4: Uruguay Round formula and the "Special Safeguard Provisions" (SSG) additional duties imposed -- The level of protection for EU raw sugar in the new WTO round under a strong Euro, after linear 36% reduction in standard tariff and a 25% cut in the intervention price for raw sugar in 2006/07. \*Additional duties are calculated from 2003/2004 onwards. Source: OEDD 2003, USDA 2003, CEC 1995, Sugaronline, author's calculations.

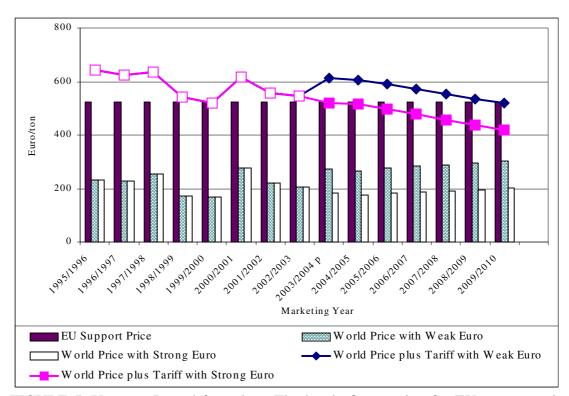


FIGURE 5: Uruguay Round formula -- The level of protection for EU raw sugar in the new WTO round after linear 36% reduction in standard tariff. Source: *FAPRI* 2003, USDA 2003, Sugaronline, author's calculations.

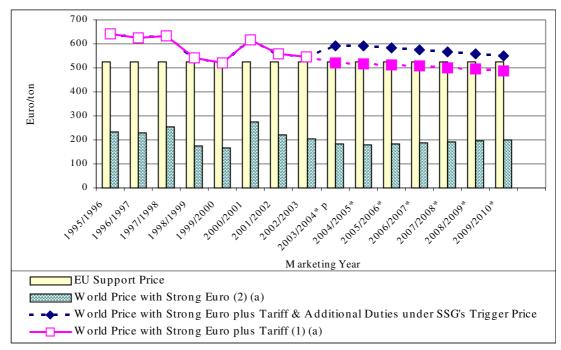


FIGURE 6: Uruguay Round formula and the "Special Safeguard Provisions" (SSG) additional duties imposed -- The level of protection for EU raw sugar in the new WTO round under a strong Euro and after linear 15% reduction in standard tariff. \*Additional duties are calculated from 2003/2004 onwards. Source: *FAPRI 2003*, USDA 2003, CEC 1995, Sugaronline, author's calculations.

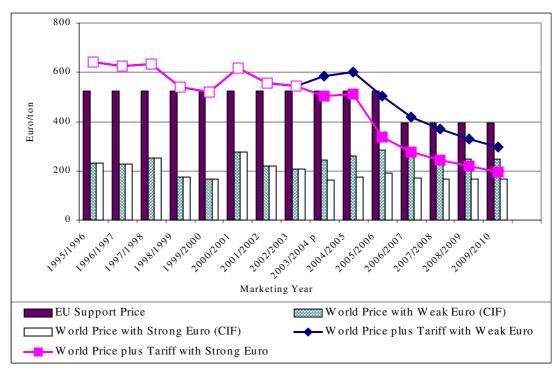


FIGURE 7: Swiss formula with a = 25 and a "down payment" tariff cut of 50% made in 2005/06 -- The level of protection for EU raw sugar in the new WTO round after tariff reduction and a 25% cut in the intervention price for raw sugar in 2006/07. Source: OECD 2003, USDA 2003, Sugaronline, author's calculations.

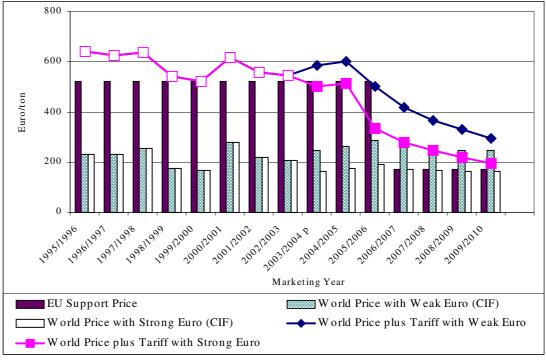


FIGURE 8: Swiss formula with a = 25 and a "down payment" tariff cut of 50% made in 2005/06 -- The level of protection for EU raw sugar in the new WTO round after tariff reduction and a 67% cut in the intervention price for raw sugar in 2006/07. Source: OECD 2003, USDA 2003, Sugaronline, author's calculations.



FIGURE 9: Harbinson Proposal formula -- The level of protection for EU raw sugar in the new WTO round after linear 60% reduction in standard tariff and a 25% cut in the intervention price for raw sugar in 2006/07. Source: OECD 2003, USDA 2003, Sugaronline, author's calculations.

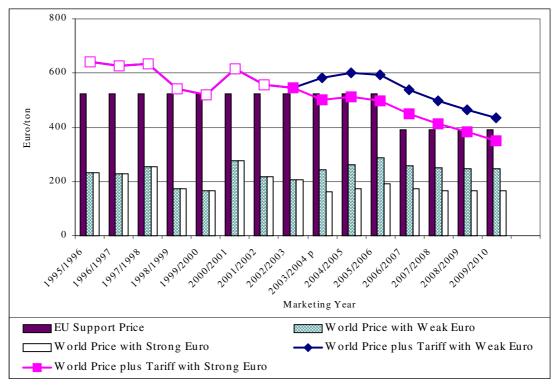


FIGURE 10: Harbinson Proposal formula -- The level of protection for EU raw sugar in the new WTO round after linear 45% reduction in standard tariff and a 25% cut in the intervention price for raw sugar in 2006/07. Source: OECD 2003, USDA 2003, Sugaronline, author's calculations.

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