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Evaluations fruit and vegetables

Evaluation of the system of entry prices and export refunds in the fruit and vegetables sector

Part 2 – Preparatory analysis

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Table of contents

LIST OF TABLES

LIST OF FIGURES

GLOSSARY

ACP « Cotonou » Agreement:	Preferential trade agreement between the EU and seventy-one African, Caribbean and Pacific (ACP) States
ASEAN:	Association of South-East Asian Nations consisting of Brunei-Darussalam, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam & Cambodia
AVE:	*Ad valorem* equivalent
CAP:	Common Agricultural Policy
CEEC:	Central and Eastern European Countries: *Albania, Armenia, Azerbaijan, Belarus, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, Serbia and Montenegro, Slovak Republic, Slovenia, Ukraine, Uzbekistan*
CCT:	Common Custom Tariff
CES:	Constant Elasticity of Substitution describes the size of the change in input substitution given a change in the price of inputs
CMO:	Common Market Organisation
EBA:	"Everything But Arms"
EC:	European Commission
EMA:	Euro-Mediterranean Agreement
EP:	Entry price
EPS:	Entry price system
EPQ:	Entry Price Quota
ER:	Export refunds
ERS:	Export refunds system
EU:	European Union
F&V:	Fruit & Vegetables
GDP:	Gross Domestic Product
GSP:	Generalised System of Preferences
IPT:	Inward Processing Traffic regime
LDCs:	Least-Developed Countries
MFN:	Most Favourite Nation
MS:	Member State
MTE:	Maximum Tariff Equivalent
NMS:	New Member States
OECD:	Organisation for Economic Co-operation and Development
RHS:	"Right Hand Side"
SAARC:	South Asian Association for Regional Cooperation consisting of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan & Sri Lanka.

SEMC:	South-Eastern Mediterranean Countries
SIV:	Standard Import Value
TARIC:	Integrated Tariff of the European Communities
TEP:	Trigger Entry Price
TOR:	Terms of Reference
TRQ:	Tariff Rate Quota
URAA:	Uruguay Round Agreement on Agriculture
VPM:	Value of the Preference Margin

1. INTRODUCTION OF THE PREPARATORY ANALYSIS

The Preparatory Analysis is part of the evaluation on Entry Prices system for fresh fruits and vegetables and the Export Refunds scheme for fresh and processed fruits and vegetables sector, within the framework Contract No. 30-CE-0035027/00-37.

The preparatory analysis is aimed to examine several aspects related to EU trade of F&V and to the management of the entry price (EP) system and export refunds (ER) scheme that can be seen as crossing the different parts of the analysis to be carried out in answering the evaluation questions on the impact of the two instruments.

This part precedes and completes the evaluation and it is based on the assessment of the following points:

- 1. The development of EU trade of F&V
- 2. The evolution of factors influencing the EU trade of F&V
- 3. Analysis on the implementation of EP and of their effectiveness
- 4. Development of the EU exports and evolution of export refunds
- 5. The price level on world markets.

1. The development of EU trade of F&V

In the first issue of the preparatory analysis, a picture of EU trade flows of F&V and of changes occurring in recent years has been drawn, particularly after the implementation of the URAA in 1995 and the end of its transition period in the year 2000. The evolution of EU trade flows has been related to the development of world trade flows in that period. The study is aimed to identify the most important F&V products traded and the main partner countries on which to focus subsequent analyses. This has been carried out on each product covered by the EP system and by the ER scheme (Tab. 1 and Tab. 2). It has also been performed on the most important traded F&V products not included in the two schemes in order to undertake a counterfactual analysis (Tab. 3). The analysis has also took into due account the enlargements of the EU to new member countries.

EU trade flows of the F&V products (imports and exports) have been compared to the evolution of the EU production. The evolution of ratio between EU imports (exports) and internal production of F&V with EP (ER) and of F&V not covered by EP (ER) chosen for counterfactual analysis has been analysed.

In this part of the analysis, we used trade data coming from Eurostat-Comext, while for the analysis on the development of world trade we used Comtrade data, and finally as regards data on EU production the analysis is based on data coming from Cronos.

2. The evolution of factors influencing the EU trade of F&V

The second step is based on the analysis of the following indicators:

- F&V consumption trends within the EU and the shares of EU products and imported products out of total consumption;
- prices of domestic, imported and exported F&V.

The first indicator links changes in F&V imports of to relative EU consumption trends. The second point aims to find in domestic/imported/exported price trends the determinants of the evolution of EU trade of F&V as well as insights into the market position of the EU F&V sector. Also in this case, the analysis has

been made comparing the main products covered by the EP system and ER scheme and those not covered. The analysis has been carried out taking into due account the enlargements of the EU to New Member States.

3. Analysis on the implementation of EP and of their effectiveness

One of the main points of the analysis of the Entry Prices (EP) system is the assessment and evaluation of its effects and effectiveness in the management of imports of F&V from third countries, that is aimed at helping to preserve trade with third countries while contributing to avoid large price drops on the EU internal market. A reasonable hypothesis to verify in this analysis is that the EP system works in such a way that when imports have a price lower than the trigger EP, the payment of the specific duty - the maximum tariff equivalent - should make these imports no more convenient. If this hypothesis is true, imports of F&V from an origin country at a prices lower then EP would be not convenient, while it remains still possible to import at a price higher than EP if this is the case.

The assessment of the soundness and strength of this hypothesis about the functioning of the EP system is one of the main points on which the preparatory analysis must be concentrated. If this hypothesis is confirmed by our analysis (see below on the criteria to assess the effects of the EP system on imports) EP may have the following effects:

- selection of imports;
- stabilisation of internal prices;
- income support;
- increase in EU F&V competitiveness;
- dynamic of trade flows.

All these effects are to be assessed and evaluated in the several evaluation themes and questions.

To verify whether the assumption made about the EP system is correct, it would be necessary to have direct information from the EU customs offices relating to the occurrence of imports in the EU of F&V paying the specific duty. Moreover, because the case of a SIV lower than EP is an indicator of the possibility of the payment of the specific duty, it would be useful to know whether in such cases there are imports and what duty is actually paid.

Unfortunately, such information is not available. Given the data available for the analysis, to verify whether there are imports at prices lower than EP it may be useful to look at the behaviour of daily SIVs, crossing this analysis with the examination of import data (volumes and values).

The comparison of SIV with the trigger EP signals possible situations in which the specific duty should be paid and therefore imports would be convenient only showing that the sale would be made at higher prices. The pattern followed by time series of imports of F&V with EP would supplement this analysis, giving insights into the presence of imports when SIVs are below the trigger EP.

4. Development of the EU exports and evolution of export refunds.

A relevant point in the evaluation exercise is the understanding of the role played by ER in supporting EU exports of F&V and in helping to stabilise internal F&V markets. This point has become particularly significant after the implementation of the URAA that introduced radical changes to the scheme to cut both the quantity of product that might benefit from the subsidy and the value of the total expenditure for the program.

The analysis has been dedicated to identifying EU export trends for F&V, in terms of both quantities and prices. In the case of products benefiting from ER it is also attempted to identify the impact of ER relating to the unit ER paid. The analysis has been extended to the fresh fruit and vegetables products not covered by the scheme chosen to carry out the counterfactual analysis (see Tab. 3). As well as in the analysis of EP, the effects of commitments made by the EU within the URAA have been analysed by comparing the situation before the implementation of such commitments, that observed at the beginning and at the end of the transition period and the most recent situation. The analysis took into account the effects of the enlargement of the EU to new countries.

The processed F&V CMO provides export refunds to support the sale of such products in external markets. Unit subsidies are established according to the rules of the processed F&V CMO in the case of products without sugar added, the sugar CMO for products with sugar added, the cereals CMO when glucose is added. The preparatory analysis identified the levels of these exports, the coverage of such subsidies and possibly unit subsidies paid. Because this topic has been already developed in previous evaluations we carried out (a. Evaluation of measures regarding fresh and processed peaches, nectarines and pears; b. Evaluation of measures regarding citrus fruits; c. Evaluation of measures regarding processed tomatoes), the findings of these evaluations form the basis for the analysis.

5. The price level on world markets

Assessment of the effects of the EP scheme on the level of prices in the EU required an analysis of world prices and price levels in major markets of non-EU countries. The identification of F&V world prices has been rather difficult, due on the one hand to the concept of world price and on the other to the breadth of quality differentiation characterising F&V products.

The “world price” is mainly a textbook notion that is associated with the concept of uniqueness of price. Because F&V markets often have a local dimension, prices vary significantly from market to market. They differ because of transportation costs and the variability in product quality. In addition to problems linked to the definition of prices, a further difficulty could arise from the availability of statistical data on the prices of fruit and vegetables outside the EU. As far as we are aware, a statistical database for average annual prices at the farm gate is available from FAO. One way to overcome these difficulties was to analyse f.o.b. export prices for the most relevant exporting countries. These data have been gathered from the Comtrade databases. The analysis has been undertaken on products with or without EP chosen for the counterfactual analysis.

The geographical coverage of the Preparatory analysis is EU-15 until 2004 and EU-25 after 2005.

The Preparatory analysis covers the period subsequent to Council Regulation No 3290/94 until 2006.

The list of products covered by the Preparatory analysis is the following:

Tab. 1 - List of products under the EP scheme

PART A

(as established by the Annex to the consolidated version of Commission Regulation No 3223/1994)

N.	CN codes	Description	Period of application
1	ex 0702 00 00	Tomatoes	From 1 January to 31December
2	ex 0707 00 05	Cucumbers (1)	From 1 January to 31December
3	ex 0709 10 00	Artichokes	From 1 November to 30 June
4	0709 90 70	Courgettes	From 1 January to 31 December
5	ex 0805 10 20	Sweet oranges, fresh	From 1 December to 31 May
6	ex 0805 20 10	Clementines	From 1 November to end of February
7	ex 0805 20 30 ex 0805 20 50 ex 0805 20 70 ex 0805 20 90	Mandarins (including tangerines and satsumas); wilking and similar citrus hybrids	From 1 November to end of February
8	ex 0805 50 10	Lemons *(Citrus limon, Citrus limonum)*	From 1 June to 31 May
9	ex 0806 10 10	Table grapes	From 21 July to 20 November
10	ex 0808 10 80	Apples	From 1 July to 30 June
11	ex 0808 20 50	Pears	From 1 July to 30 April
12	ex 0809 10 00	Apricots	From 1 June to 31 July
13	ex 0809 20 95	Cherries, other than sour cherries	From 21 May to 10 August
14	ex 0809 30 10 ex 0809 30 90	Peaches, including nectarines	From 11 June to 30 September
15	ex 0809 40 05	Plums	From 11 June to 30 September

(1) Other than cucumbers referred to in Part B of this Annex

PART B

N.	CN codes	Description	Period of application
16	ex 0707 00 05	Cucumbers intended for processing	From 1 May to 31 October
17	ex 0809 20 05	Sour cherries *(Prunus cerasus)*	From 21 May to 10 August

Tab. 2 - List of products under the ER scheme

FRESH F&V PRODUCTS

(Article 7, paragraph 2 of Commission Regulation (EC) No 1961/2001 lists the products granted by export subsidies)

N.	CN codes	Description
1	0702 00 00	tomatoes
2	0802 12 10 0802 12 90	shelled almonds
3	0802 21 00 0802 22 00	hazelnuts (*Corylus* ssp.)
4	0802 31 00	walnuts in shell
5	0805 10 20	oranges
6	0805 20 10	clementines
7	0805 20 30	monreales and satsumas
8	0805 20 50	mandarins and wilkings
9	0805 20 70	tangerines
10	0805 20 90	other similar citrus hybrids
11	0805 50 10	lemons (*Citrus limon* , *Citrus limonum*)
12	0805 50 90	limes (*Citrus aurantifolia*)
13	0806 10 10	table grapes
14	0808 10 10 0808 10 80	apples
15	0809 30 10 0809 30 90	peaches, including nectarines

PROCESSED F&V PRODUCTS

(Article 3 of Commission Regulation No 1429/95)

N.	CN codes	Description
1	0806 20	dried grapes
2	81210	cherries provisionally preserved
3	200210	tomatoes prepared or preserved otherwise than by vinegar or acetic acid
4	2006	fruit preserved
5	200819	nuts other than groundnuts
6	from 200911 to 200919	orange juice

A counterfactual analysis has been also carried out as follows :

Tab. 3 - Products chosen for the counterfactual analysis

Vegetables products chosen for the counterfactual analysis on EP scheme:

Relevant products within the EP scheme:	*Relevant products not covered by the EP scheme:*
0702 Tomatoes, fresh or chilled	0792 00 00 Asparagus
0707 00 05 Cucumbers	07031019 Onions fresh or chilled excl sets
0709 90 70 Courgettes	0708 20 Beans (Vigna spp., Phaseolus spp.)
0709 90 80 Globe artichokes	0709 60 10 Sweet peppers

Fruits products chosen for the counterfactual analysis on EP scheme:

Relevant products within the EP scheme:	*Relevant products not covered by the EP scheme:*
0805 10 20 Sweet oranges, fresh	0805 40 Grapefruit, including pomelos
0806 10 10 Table grapes	0807 19 Other (Melons)
0808 10 80 Other (Apples)	0810 10 Strawberries
0808 20 50 Other (Pears)	0810 50 Kiwifruit

Vegetables products chosen for the counterfactual analysis on ER scheme:

Relevant products within the ER scheme:	*Relevant products not covered by the ER scheme:*
0702 Tomatoes, fresh or chilled	0707 00 05 Cucumbers
	07031019 Onions fresh or chilled excl sets
	0709 60 10 Sweet peppers
	0709 90 80 Globe artichokes

Fruits products chosen for the counterfactual analysis on ER scheme:

Relevant products within the ER scheme:	*Relevant products not covered by the ER scheme:*
0805 10 20 Sweet oranges, fresh	0807 19 Other (Melons)
0805 20 10 Clementines	0808 20 50 Other (Pears)
0806 10 10 Table grapes	0810 10 Strawberries
0808 10 80 Other (apples)	0810 50 Kiwifruit

2. PREPARATORY ANALYSIS

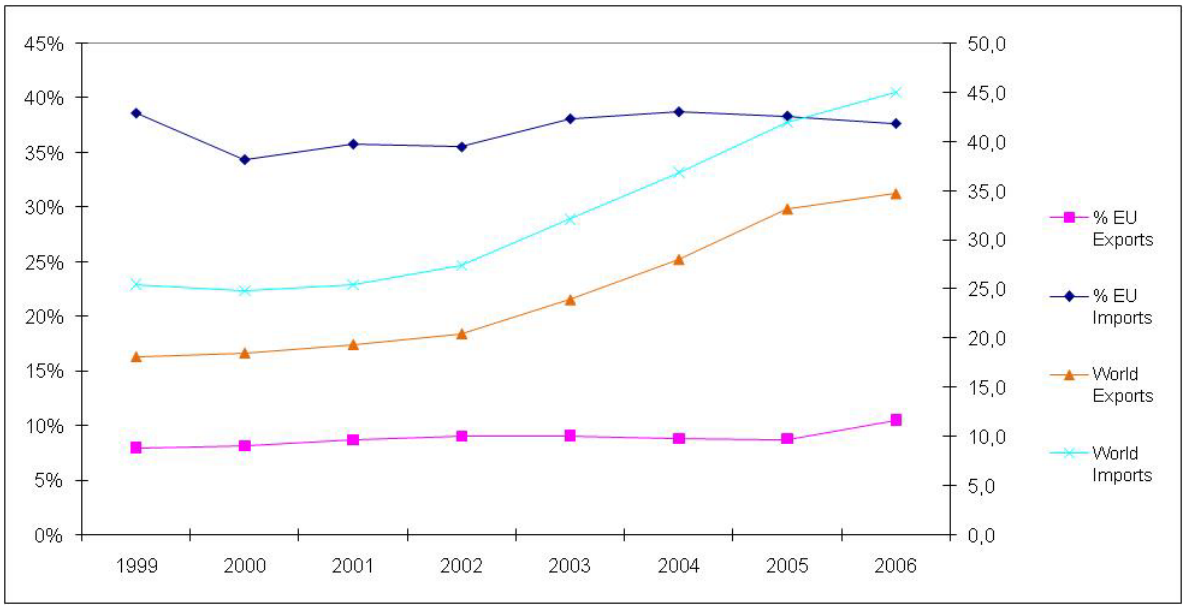
2.1 The development of EU trade of F&V

2.1.1 Overview

The EU is a key global trading partner in F&V, being the leading world importer and second largest world exporter. Its current net trade balance is negative. The EU currently has the world's largest F&V deficit, accounting for a significant share of the EU total agro-food trade deficit. This trade deficit has increased since the year 2000, with a deficit of 8.4 billion Euro in fruits and 1.3 billion Euro in vegetables in 2004.

Fruit trade is much larger than trading in vegetables. Fruits are generally less perishable than vegetables, and those the most commonly consumed can be produced in the EU. According to Comtrade data, in the year 2006 world exports of fruit (Harmonised System Code 08 of Commodity Classification "Edible fruit, nuts, peel of citrus fruit, melons", that includes nuts, tropical and temperate fresh fruits, as well as preserved and frozen fruits) net of the Eu-15 internal trade, were 34,7 billion $ at fob prices (45 billion $ of imports at cif prices). The share of EU-15 exports was 10,5%, while the share of imports was 37,7%. The figure below shows data on world trade and the share of EU-15 imports and exports from 1999 to 2006. In seven year, world trade of fruit was almost doubled, while the share of EU-15 imports was slightly decreasing and that of exports slightly increasing. This shows that the EU-15 imports of fruit increased but less than the imports by other countries. In the same time the EU-15 F&V industry has been able to keep up with the boosting of world trade of fruits and to increase the share of exports.

Fig. 1 - World imports and exports in US billion $ of fruits (HS Code 08), right axis, and % share of EU-15 imports and exports, left axis

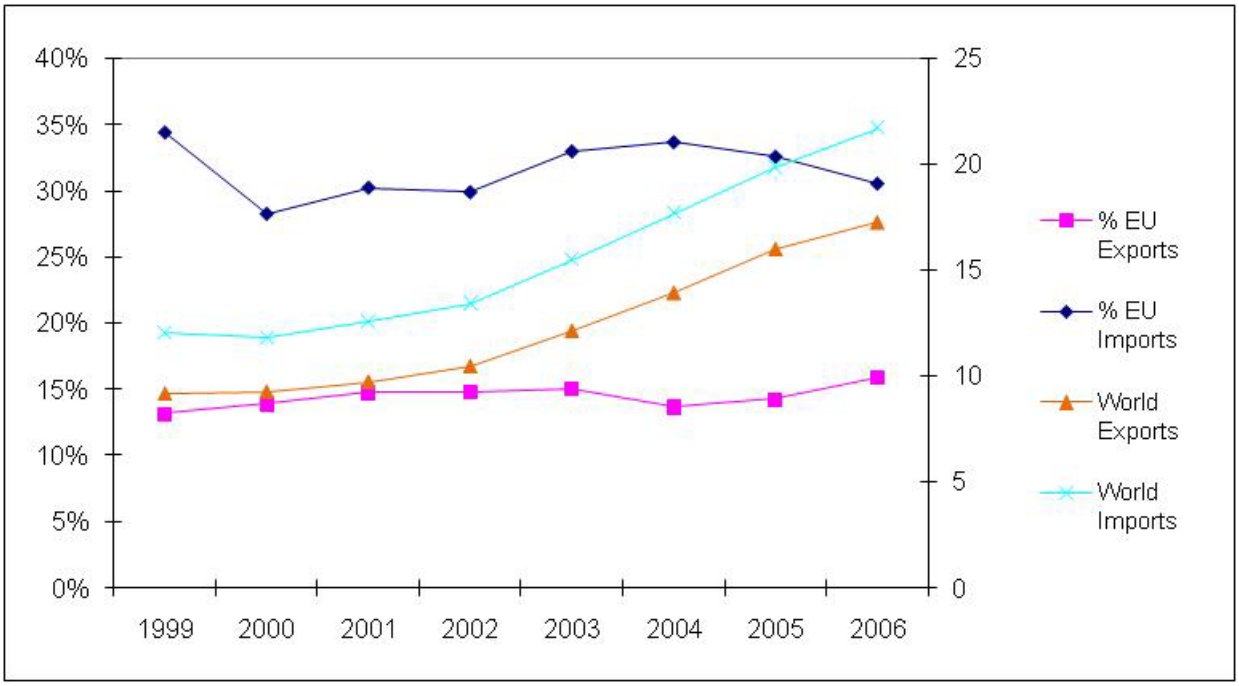


Sources: Comtrade database, processed by Agrosynergie.

In order to have a better knowledge of the changes in the EU fresh fruit sector it is useful to confine our attention only to the trade of fresh temperate fruits in which the EU sector is involved. To this end we subtracted from the previous aggregate the trade of nuts, tropical fresh fruits, as well as of frozen and

preserved fruits. The world exports of temperate fruits in 2006 were 17,2 billion $, while imports were 21,6 billion $. The share of EU-15 imports was lower than the previous one and decreasing, while the share of exports was higher and increasing from 13,2% in 1999 to 15,8% in 2006.

Fig. 2 - World imports and exports in US billion $ of fruits of temperate fruits, right axis, and % share of EU-15 imports and exports, left axis



Sources: Comtrade database, processed by Agrosynergie.

The five most traded fresh products are bananas (13% of the fresh F&V trade in 2002-2004), tomatoes (8%), apples (7.5%), grapes (7.5%) and oranges (5%). In the case of processed F&V the six most traded products are potatoes (7,6% of the world exports of processed F&V in 2005), vegetables and mixture of vegetables (6,3%), nuts prepared or preserved (5,8%), apple juice (5,7%), orange juice (5,6%) and tomatoes (5,2%).

Looking at the four main traded temperate fresh fruits (apples, oranges, table grapes and pears), we can observe that the share of EU imports is lowering for all products we considered while that of exports is increasing. Generally the share of EU imports in value is higher than the corresponding share in quantity, meaning an higher average unit value of EU imports the only exception is given by pears, while in the case of the shares of exports there are not wide differences between the two series. This data highlights that EU consumers of fruits show on average a higher willingness to pay than consumers in other countries. This phenomena is linked to the greater per capita income of EU consumers and, as it will be seen in the following pages, it is also reflected in the increasing imports of fruit from southern hemisphere countries in counter seasonal periods.

Tab. 4 - % share of EU-15 imports and exports on the word trade of apples, pears, grapes and oranges

	Share on values							
	Apples		Grapes		Oranges		Pears	
	Exp	Imp	Exp	Imp	Exp	Imp	Exp	Imp
1999	11.7%	36.2%	14.3%	25.3%	21.8%	35.8%	9.4%	36.2%
2000	14.9%	30.0%	12.7%	21.9%	22.9%	26.4%	10.4%	30.2%
2001	13.6%	28.5%	15.7%	22.6%	23.7%	30.5%	12.2%	25.9%
2002	13.7%	28.7%	13.5%	21.6%	19.9%	24.2%	11.7%	30.0%
2003	12.0%	27.5%	15.6%	22.7%	17.4%	25.8%	12.2%	29.6%
2004	7.7%	29.4%	9.0%	23.8%	14.8%	25.1%	13.8%	29.4%
2005	9.7%	26.4%	10.2%	24.4%	11.1%	27.0%	15.7%	28.8%
2006	12.1%	23.2%	10.7%	25.7%	14.1%	24.2%	18.4%	24.8%

	Share on quantities							
	Exp	Imp	Exp	Imp	Exp	Imp	Exp	Imp
1999	11.5%	45.6%	10.4%	29.4%	20.9%	33.9%	10.1%	39.6%
2000	15.2%	34.6%	9.7%	24.4%	18.3%	24.5%	11.3%	33.8%
2001	14.6%	36.6%	12.4%	27.5%	20.8%	31.2%	14.8%	30.8%
2002	14.6%	38.8%	8.2%	26.7%	24.0%	23.7%	14.6%	36.1%
2003	13.9%	41.0%	10.1%	29.5%	21.5%	27.4%	17.0%	37.7%
2004	10.8%	43.0%	9.4%	31.0%	18.5%	28.8%	19.8%	40.0%
2005	11.8%	38.9%	10.9%	31.2%	15.6%	27.8%	22.0%	35.4%
2006	14.8%	34.8%	11.8%	31.3%	17.5%	25.1%	26.4%	30.3%

Sources: Comtrade database, processed by Agrosynergie.

In terms of value, the main fresh fruit suppliers of the EU are Ecuador, Costa Rica, Colombia, South Africa, Chile, Argentina, New Zealand, Brazil, Israel and USA. Nevertheless, the first three countries appear in the list because of their relevance as banana exporters. As regards fresh vegetables, the main EU suppliers are Morocco, Kenya, Israel, Turkey, Egypt, Peru, New Zealand and USA.

The major export markets for the EU are, in terms of quantity, Russia, Switzerland and Egypt, and, in terms of value, Russia, Switzerland and the USA. For processed F&V, the mainly EU imports are from Turkey, Brazil and China, while EU exports are sent to the USA, Russia and Japan.

A recent detailed analysis carried out by the European Commission based on FAO data[1] summarises the following facts about world trade of F&V, relating to EU15:

- Besides the EU, the largest exporters[2] of F&V are USA, Mexico, China, Chile, Ecuador and South Africa. The EU has moved from second to third place in the last decade. The EU remains the world's largest importer[3], followed closely by the USA, and at a greater distance by Canada, Japan and China.
- World trade in F&V is increasingly concentrated. The top ten exporters account for two thirds of world exports (50% in the early 1980s), while the top ten importers receive 80% of produce (73% in the early 1980s). The EU and USA account for half of world imports.
- There has been strong growth in trade, with a relevant role played by exports from southern hemisphere countries toward northern countries.
- A preference for variety is boosting world trade, although total demand has been relatively stable in the EU. The reasons behind stagnant global consumption include life style changes towards convenience and a perceived loss of taste among consumers. Generally speaking, there is a trend towards overproduction.

[1] *Agricultural Commodity Markets. Past developments. Fruits and vegetables. An analysis of consumption, production and trade based on statistics from the Food and Agriculture Organization (FAO).* European Commission Directorate-General For Agriculture And Rural Development Directorate G. Economic analyses and evaluation G.5 Agricultural Trade Policy Analysis, July 2007.

[2] As stated in COMTRADE database

[3] As stated in COMEXT database

International F&V markets are quickly becoming more highly concentrated in the trading and the retailing sectors. In response to consumer trends and marketing demands, shippers of fresh produce have increased their involvement with buyers and other members of the supply chain. The precise mechanisms for price determination are more related to long-term arrangements, and spot markets are losing importance in major markets, especially in Northern Europe. It is difficult to forecast how these new forms of marketing will affect prices of traded produce in the future. On the one hand, suppliers are often forced to accept low prices in order to obtain volume growth. On the other, they are forced to upgrade the quality, given the strong competition in the EU market to ensure their products meet retailers' and consumers' expectations.

In the next paragraph (2.1.2) we identify the fastest growing trade products in the EU (both as an importer and as an exporter). Then, in section 2.1.3 we carry out an exploratory comparative assessment of trading performance, distinguishing between products which are covered and not covered by EPS, on the import side, and products eligible and not eligible for ER, on the export side. In section 2.1.4 we examine the development of domestic production in the EU compared to trade volumes. In this preparatory phase of the study the number of products considered in each section depends mainly on data availability and the relevance of the products for EPS and ERS.

2.1.2 Fastest growing products

The COMTRADE database allows for an analysis of trends among major importers and exporters. Analysis of data from COMTRADE has focused on products defined at the HS1992 level 6 digit codes because the trade statistics under the 8 digit CN code classification, used for products listed in table 1 and 2, are not available in this database. It must be underlined that the HS6 codes are not perfectly corresponding to the 8 digit CN code products but it makes possible to study world trade developments from the mid-nineties until 2006.

This preparatory analysis is of rather a descriptive nature, but it supplies a preliminary assessment of the comparative trading trends of imported and exported products with EP and ER, respectively, compared to products without EP and ER. For this analysis 20 imported products and 31 exported products were selected.

Of these, 11 have EP and 11 have ER within the EU. It is to be specified that with reference to the products list, as shown in Tab. 1 (products with EP) in this analysis the following are not included: (i) courgettes, (ii) cherries, (iii) peaches. With reference to the products list, as shown in Tab. 2 (products with ER) in this analysis the following are not included: (i) hazelnuts, (ii) walnuts, (iii) peaches, (iv) fruit preserved by sugar, (v) nuts prepared.

This analysis was performed on the products chosen for the counterfactual analysis, as shown in Tab. 3. To these products we added all products under the EPS and all fresh and processed F&V within the ERS. We also add to products not covered by the EPS the following categories: 070320 Garlic fresh or chilled, 070390 Leeks & other alliaceous vegetables fresh or chilled, 070810 Peas shelled or unshelled fresh or chilled, while we added to products not included in the ERS: 070320 Garlic fresh or chilled; 070390 Leeks & other alliaceous vegetables fresh or chilled ;0704 Cabbage cauliflower kohlrabi & kale fresh chilled; 070519 Lettuce fresh or chilled except cabbage lettuce; 070610 Carrots and turnips fresh or chilled; 070920 Asparagus fresh or chilled; 070930 Aubergines(egg-plants) fresh or chilled; 070951 Mushrooms fresh or chilled; 080540 Grapefruit fresh or dried; 080910 Apricots fresh; 080940 Plums sloes fresh; 081020 Raspberry blackberry mulberry and loganberry fresh; 080221 Hazelnuts and filberts in shell fresh or dried.

The following are not included: (i) strawberries (among products without EP), (ii) kiwi fruits (both without EP and without ER).

Two main questions to study were proposed:

1. Are imports of products with EP (at the EU) growing fast among major import partners?

2. Are exports of products with ER (at the EU) growing fast among major export partners?

The selected countries for the comparative study were the following:

Selected importers	Selected exporters
Australia	Brazil
China	Chile
EU15	China
Japan	EU15
USA	Morocco
	New Zealand
	South Africa
	Turkey
	USA

In order to identify fast growing imported and exported products in the cited markets, we calculated average annual growth rates of trade values (in USD) and quantities (in Kg) for the periods from 1995/96 to 2000/01 and from 2000/01 to 2005/06[4]. The goal of this exploratory exercise is to compare the performance of EU import and export markets with that observed for major trading partners.

Data for the EU15 refer to extra EU trade. Average import and export growth for the selected group of products was calculated for the USA and used as a benchmark to identify fastest growing exported and imported products. Thus, products/markets where import growth was larger than the group simple average calculated for the US are classified as fast growing imports; and products/markets where export growth was larger than the group simple average calculated for the US are classified as fast growing exports.

Tab. 5 summarizes some preliminary results, which are detailed in the annexes to the Preparatory Analysis (Para. 1.1.1. "*World main actors*"). The table shows the number of products which are classified as relatively fast imports and fast exports in selected import and export markets:

[4] Comparisons are carried out between average values for 1995-1996, 2000-2001 and 2005-2006. As indicated in the text, the nature of the exercise is basically exploratory and is aimed at identifying the number of fast growing import and export products in the EU vis-à-vis other partners.

Tab. 5 - Number of fast growing imported and exported products in selected partners

	Fast growing imports							
	With Entry Price at the EU				Without Entry Price at the EU			
	Trade Value	Net Weight (kg)	Trade Value	Net Weight (kg)	Trade Value	Net Weight (kg)	Trade Value	Net Weight (kg)
	1995/96	1995/96	2000/01	2000/01	1995/96	1995/96	2000/01	2000/01
Importers	2000/01	2000/01	2005/06	2005/06	2000/01	2000/01	2005/06	2005/06
Australia	3	3	4	4	4	4	8	6
China	7	6	4	1	5	6	5	4
EU15	1	2	5	7	1	4	6	7
Japan	5	7	1	0	2	4	1	3
USA	4	4	4	3	2	1	5	8

	Fast growing exports							
	With ER at the EU				Without ER at the EU			
	Trade Value	Net Weight (kg)	Trade Value	Net Weight (kg)	Trade Value	Net Weight (kg)	Trade Value	NetWeight (kg)
	1995/96	1995/96	2000/01	2000/01	1995/96	1995/96	2000/01	2000/01
Exporter	2000/01	2000/01	2005/06	2005/06	2000/01	2000/01	2005/06	2005/06
Brazil	7	7	5	5	7	9	5	5
Chile	8	6			17	14		
China	4	8	6	7	5	15	14	14
EU15	4	5	5	0	6	12	14	5
Morocco	3	5	4	4	7	8	15	14
New Zealand	5	3	5	5	11	5	6	7
South Africa			6	7			16	11
Turkey	2	3	8	8	6	13	13	14
USA	5	3	3	3	12	14	12	11

Sources: Comtrade database, processed by Agrosynergie.

The table suggests that the number of fast growing imported products in the EU was relatively small compared to other major importers in the period 1995/96 to 2000/01, while such number significantly increased in the EU for the next period 2001/01 to 2005/06. It is worth noting that the increase in fast growing imports took place in both groups of products, with and without EP.

As far as exports are concerned, EU exports of products with ER have underperformed vis-à-vis most major exporters except for the USA. This behaviour has been even more significant in quantity terms for the period 2000/01 to 2005/06, where no EU product with ER has been fast growing in quantity terms. By contrast, export performance, measured by the number of fast growing exported products, has been significantly better for products without ER, especially in value terms. Nevertheless, in quantity terms, the number of over-performing EU products without ER is also low in the EU compared with other major exporters.

2.1.3 Relative trade performance of selected F&V

The COMEXT database allows for a detailed analysis of trade performance for the two periods referred to in the previous section. As a matter of fact, the analysis carried out has taken a sample of products which is more complete than the sample selected for the counterfactual analysis that will be referred to when answering the evaluation questions. In the list of products selected for the preparatory analysis for EU exports we also took some processed F&V of relevance.

In particular, it has to be specified that with respect to the products listed in Tab. 1 (products with EP) the following are not included in this analysis: (i) mandarins, (ii) cherries. Whit respect to the products listed in Tab. 2 (products with ER) only mandarins are not included in this analysis.

As regards the products chosen for the counterfactual analysis, listed in Tab. 3, in addition to all the products established, this analysis includes also all products with EP as well as all fresh and processed F&V with ER and the products listed in the following table.

Tab. 6 - List of products considered for the preparatory analysis on export performance

Products without EP (26)

- 070310 FRESH OR CHILLED ONIONS AND SHALLOTS
- 070820 FRESH OR CHILLED BEANS 'VIGNA SPP., PHASEOLUS SPP.', SHELLED OR UNSHELLED
- 070920 FRESH OR CHILLED ASPARAGUS
- 080211 FRESH OR DRIED ALMONDS IN SHELL (*)
- 080212 FRESH OR DRIED ALMONDS, SHELLED AND PEELED (*)
- 080231 FRESH OR DRIED WALNUTS IN SHELL (*)
- 080232 FRESH OR DRIED WALNUTS, SHELLED AND PEELED (*)
- 080540 FRESH OR DRIED GRAPEFRUIT
- 08071090 FRESH MELONS (EXCL. WATERMELONS)
- 081010 FRESH STRAWBERRIES
- 081050 KIWIFRUIT
- 200210 TOMATOES, WHOLE OR IN PIECES, PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID (*)
- 200290 TOMATOES, PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID (EXCL. WHOLE OR IN PIECES) (*)
- 200551 SHELLED BEANS 'VIGNA SPP., PHASEOLUS SPP.', PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID (EXCL. FROZEN) (*)
- 200559 UNSHELLED BEANS 'VIGNA SPP., PHASEOLUS SPP.', PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID (EXCL. FROZEN) (*)
- 200560 ASPARAGUS, PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID (EXCL. FROZEN) (*)
- 200860 CHERRIES, PREPARED OR PRESERVED, WHETHER OR NOT CONTAINING ADDED SUGAR OR OTHER SWEETENING MATTER OR SPIRIT (EXCL. PRESERVED WITH SUGAR BUT NOT LAID IN SYRUP, JAMS, FRUIT JELLIES, MARMALADES, FRUIT PURÃ‰E AND PASTES, OBTAINED BY COOKING) (*)
- 200911 FROZEN ORANGE JUICE, UNFERMENTED, WHETHER OR NOT CONTAINING ADDED SUGAR OR OTHER SWEETENING MATTER (EXCL. CONTAINING SPIRIT) (*)
- 200919 ORANGE JUICE, UNFERMENTED, WHETHER OR NOT CONTAINING ADDED SUGAR OR OTHER SWEETENING MATTER (EXCL. CONTAINING SPIRIT, FROZEN, AND OF A BRIX VALUE <= 20 AT 20Â°C) (*)
- 070320 GARLIC, FRESH OR CHILLED (*)
- 07096010 FRESH OR CHILLED SWEET PEPPERS
- 07108051 SWEET PEPPERS, UNCOOKED OR COOKED BY STEAMING OR BY BOILING IN WATER, FROZEN (*)
- 07108070 TOMATOES, UNCOOKED OR COOKED BY STEAMING OR BY BOILING IN WATER, FROZEN (*)
- 07108085 ASPARAGUS, WHETHER OR NOT COOKED BY BOILING IN WATER OR BY STEAMING, FROZEN (*)
- 07114000 CUCUMBERS AND GHERKINS PROVISIONALLY PRESERVED, E.G. BY SULPHUR DIOXIDE GAS, IN BRINE, IN SULPHUR WATER OR IN OTHER PRESERVATIVE SOLUTIONS, BUT UNSUITABLE IN THAT STATE FOR IMMEDIATE CONSUMPTION (*)
- 07122000 DRIED ONIONS, WHOLE, CUT, SLICED, BROKEN OR IN POWDER, BUT NOT FURTHER PREPARED (*)

Exported F&V without ER (20)

- 070910 FRESH OR CHILLED GLOBE ARTICHOKES
- 070700 CUCUMBERS AND GHERKINS, FRESH OR CHILLED
- 07099070 FRESH OR CHILLED COURGETTES (*)
- 070320 GARLIC, FRESH OR CHILLED (*)
- 07096010 FRESH OR CHILLED SWEET PEPPERS
- 070310 FRESH OR CHILLED ONIONS AND SHALLOTS
- 070820 FRESH OR CHILLED BEANS 'VIGNA SPP., PHASEOLUS SPP.', SHELLED OR UNSHELLED (*)
- 070920 FRESH OR CHILLED ASPARAGUS (*)
- 08071090 FRESH MELONS (EXCL. WATERMELONS)
- 080910 FRESH APRICOTS (*)
- 08094005 FRESH PLUMS (*)
- 080540 FRESH OR DRIED GRAPEFRUIT (*)
- 081010 FRESH STRAWBERRIES
- 081050 FRESH KIWIFRUIT
- 080820 FRESH PEARS AND QUINCES
- 200551 SHELLED BEANS 'VIGNA SPP., PHASEOLUS SPP.', PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID (EXCL. FROZEN) (*)
- 200559 UNSHELLED BEANS 'VIGNA SPP., PHASEOLUS SPP.', PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID (EXCL. FROZEN) (*)
- 200560 ASPARAGUS, PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID (EXCL. FROZEN) (*)
- 07108080 ARTICHOKES, UNCOOKED OR COOKED BY STEAMING OR BY BOILING IN WATER, FROZEN (*)
- 07108085 ASPARAGUS, WHETHER OR NOT COOKED BY BOILING IN WATER OR BY STEAMING, FROZEN(*)

Note (*) = products added in this analysis to those included in the general list of products (Tab. 3)

2.1.4 Relative performance of F&V imported in EU

The next two tables present the relative import performance of products subjected or not subjected to EP (see the Annex to the Preparatory Analysis, Para. 1.1.2. "EU trade" for detailed results). Tab. 7 refers to results obtained for the group of products listed above (Tab. 6). The average annual rate of changes for corresponding periods[5] are calculated for each product and for the total imported volumes of products with and without EP[6].

The main remarks that emerge for this descriptive study are the following:

- In the second period (2000/02-2004/2006), (2000/01-2005/2006) import trends for EU15 are not significantly different from trends for EU25.
- In the first period (1995/97-2000/2002), (1995/96-2000/2001) imports of EP products were significantly slower than imports of products without EP.
- In the second period, imports of the two types of products grew faster but EP products' imports were relatively faster than imports of products without EP.

Tab. 7 - EU imports of selected F&V (Quantity in tons) Summary and Average Annual rate of change (in percentage)

	Average volume (tons)					Average Annual rate of change (%)		
	EU15 (Extra EU15)			EU25 (Extra EU25)		EU15 (Extra EU15)	EU15 (Extra EU15)	EU25 (Extra EU25)
	Av 95/97	Av 00/02	Av 04/06	Av 00/02	Av 04/06	Av 95/96 Av 00/02	Av 00/02 Av 04/06	Av 00/02 Av 04/06
Products with EP	2 856 414	2 806 968	3 630 466	2 824 842	3 585 543	-0.3	6.6	6.1
Products without EP	2 390 078	2 831 927	3 205 531	2 835 136	3 133 914	3.5	3.1	2.5
Fresh	1 141 029	1 351 744	1 715 793	1 330 153	1 670 587	3.4	6.1	5.9
Processed	1 249 048	1 480 183	1 489 737	1 504 983	1 463 327	3.5	0.2	-0.7
Total	**5 246 491**	**5 638 895**	**6 835 996**	**5 659 978**	**6 719 457**	**1.5**	**4.9**	**4.4**
						Simple average growth of product sample		
Products with EP						1.9	12.6	11.6
Products without EP						6.0	6.3	6.0
Fresh						5.6	9	9.5
Processed						6.3	3.6	2.5

Source: Comext database processed by Agrosynergie.

2.1.5 Relative performance of F&V exported by the EU

The next table (Tab.8) presents the relative export performance of the group of exported products presented in the Tab. 6. The main remarks that emerge for this descriptive study are as follows:

- Export trends for EU15 in products with ER differ from trends for EU25 in the second period. Overall EU25 exports of ER products have increased faster than EU15 exports of ER products. However, this development is largely explained by development of apple exports at the EU25 level.

[5] Annual growth rates between two values X_1 and X_2 are given by: Y = 100 * (imp (ln X_1/X_2)/T)-1) where T is the number of years between the two values. The indicator Y represents the constant rate which applied to the initial value every year, produces the final value at the end of the period.

[6] Change in total imports/exports can be attributed to a small number of products with significant weight in the structure of imports/exports. For this reason, to give an overall picture of the average import changes for products covered and not covered by the EP, the import growth rate for the total group of F&V was also calculated as a "simple arithmetic average of the product sample" of the list of products considered. This operation gives an idea of the 'average change' irrespective of the weight of the considered products in total imports/exports.

In the first period, total export growth of ER products has been higher than total export growth of the same products in the second period.

- Total exports of products with ER have grown at a slower velocity than exports of products without ER.

It is clear that we cannot attribute all the observed changes to the effect of the phasing out of ER after the end of the UR. Nevertheless, the trends observed suggest that, in spite of the progressive reduction of ER, in particular for fresh products, the growth rate of exported products eligible for ER was higher between 1995-1997 and 2000-2002 than between 2000-2002 and 2004-2006. In the last period, the group of exported products which benefit from ER are performing worse than the group of products without ER. The appreciation of the exchange rate of the Euro with respect to other currencies may supply a partial explanation for such stagnant performance. However, the appreciation could also have affected the export performance of non ER products, but they performed well during the last four years.

Tab. 8 - EU exports of selected F&V (tons) Summary table

	Average volumes (tons)					Average Annual rate of change (%)		
	EU15 (Extra EU15)			EU25 (Extra EU25)		EU15 (Extra EU15) Av 95/97 Av 00/01	EU15 (Extra EU15) Av 00/02 Av 04/06	EU25 (Extra EU25) Av 00/02 Av 04/06
	Av 95/97	Av 00/02	Av 04/06	Av 00/02	Av 04/06			
Fresh	2 148 201	2 352 936	2 302 081	1 549 340	1 732 467	1.8	-0.5	2.8
Processed	568 464	697 334	775 879	666 617	692 146	4.2	2.7	0.9
Total Products with ER	2 716 664	3 050 270	3 077 959	2 215 957	2 4246 12	2.3	0.2	2.3
Fresh	621 691	916 089	1 281 383	719 036	1 033 534	8.1	8.8	9.5
Processed	40 156	56 854	87 794	50 824	77 510	7.2	11.5	11.1
Total Products without ER	661 846	972 944	1 369 177	769 860	1 111 044	8	8.9	9.6
TOTAL SAMPLE	**3 378 511**	**4 023 214**	**4 447 136**	**2 985 817**	**3 535 656**	**3.6**	**2.5**	**4.3**
						Simple average growth of product sample		
						Products with ER		
Fresh						5.3	1.76	2.17
Processed						-0.26	4.84	0.3
Total						3.34	2.85	1.51
						Products without ER		
Fresh						3.83	9.74	9.3
Processed						0.66	4.92	1.31
Total						4.1	7.63	6.97
TOTAL SAMPLE						**3.18**	**5.92**	**4.64**

Source: Comext database processed by Agrosynergie.

2.1.6 EU Production and Trade

Production of fruits can fluctuate strongly, depending on the weather during the growing seasons. These fluctuations have a strong influence on prices, and import and export volumes. It is difficult to isolate the impact of EP or ER from other determinants of deficits or surpluses. However, we can examine the extent, in the medium term, to which the products affected by EP or ER have had a different performance than products not covered by such policies.

The development of EU imports and exports of F&V compared to domestic production can be helpful in assessing the relative pro-trade orientation of EU markets (opening to imports, propensity to export). This is measured by the percentage of imports and exports in relation to domestic production. For this study 20

products / were selected[7]. Out of these, 10 products are subjected to EP and 9 have benefited from ER. Except for courgettes, the products considered for the "counterfactual analysis" are part of the sample.

EU production in 2005 compared to 1999 figures is higher for only a few products: onions, asparagus, clementines, kiwi, peppers and processed tomatoes. For the rest of F&V, production in 2005 was lower than production in 1999.

The detailed results are shown in the Annex to the Preparatory Analysis, Para. 1.1.3. *"Production & Trade"*. Calculations have also been made for a smaller sample of products (those chosen for the "counterfactual analysis"), but results led to similar conclusions, so we present here the table with the whole set of 20 products distributed between groups (with and without EP for imports, with and without ER for exports).

2.1.7 EU Production and imports

EU imports as a ratio of EU domestic production was calculated. (see Annex to the Preparatory Analysis, Para. 1.1.3. *"Production & Trade").* Results were expressed as indices (taking 1999 base as 100). Then simple arithmetic averages of indices were estimated for the two groups of F&V (that is, with and without EP). These indices allow for a summary of the development of imports compared to domestic production for products covered and not covered by EP. These average indices are shown in Tab. 9. The table indicates that on average the percentage of imports vis-à-vis total production has increased faster for EP products than for non-EP products.

Tab. 9 - Average index of EU imports on production for a group of F&V (1999 = 100)

		1999	2000	2001	2002	2003	2004	2005
Average index (EP products)	EU15	100	94.9	105.9	124.1	168.1	174.4	274.9
	EU25	100	98.9	110	122	168.1	172.3	248.3
Average index (non EP products)	EU15	100	104.7	115.9	124.7	132.3	130.7	158.4
	EU25	100	107.3	115.1	128.2	142.4	143.9	180.6

Source: EUROSTAT, COMEXT and Agrosynergie elaboration

Again, we cannot attribute the evolution of the import/production ratio to the changes in EP. However, we can see that the system has not prevented this ratio from increasing, so the existence of EP has been compatible with import growth.

2.1.8 EU Production and exports

A similar operation led to the calculation of the percentage of exports vis-à-vis domestic production, but this time we took the simple averages of the indices calculated for ER products compared with the products without ER. This operation is shown in Tab. 10. Here the results show that, on average, products with ER have shown slower growth in terms of exports/production than products without ER[8].

[7] Almonds, cucumbers, onions, asparagus, strawberries, clementines, melons, grapefruit, grapes, peaches and nectarines, pears, apples, artichokes, oranges, lemons, kiwifruit, beans, pepper, fresh tomato and processed tomato.

[8] Detailed results on a product basis are presented in the Annex to the Preparatory Analysis, Par. 1.1.3. "*Production & Trade*".

Tab. 10 - Average index of EU exports in relation to production for a group of F&V (1999 = 100)

		1999	2000	2001	2002	2003	2004	2005
Average index (ER products)	EU15	100	92.4	106.5	112	143.9	155.6	160
	EU25	100	93.8	106.9	108.7	141.4	150.8	153.2
Average index (non ER products)	EU15	100	107.7	119.8	139.4	173	188.3	287
	EU25	100	110.6	119.9	139.9	179.3	195.1	294.2

Source: EUROSTAT, COMEXT and Agrosynergie elaboration

The fact that the exports to production ratio is less for products with ER than for products without ER could be the result of the reduction in export refunds in recent years, but also a sign of a higher competitiveness of products without ER.

Nevertheless, it is worth noting that, according to the indicators presented, domestic production of products without ER grew comparatively faster than domestic production of products covered by ER.

2.2 The evolution of factors influencing the EU trade of fresh F&V

This part of the preparatory analysis focuses on two factors to which trade of F&V is linked regarding EU production and consumption trends on the one hand and prices of domestic and imported products on the other. More precisely, the study is aimed at identifying F&V consumption trends within the EU and the shares of EU products out of total consumption. Also in this case, the analysis has been carried out by comparing the main products covered by the EP system and ER scheme with those not covered. The study of prices is aimed at discovering their role in changes in EU trade of F&V.

2.2.1 Fresh F&V production and consumption trends

The analysis of production and consumption trends has been performed using data from the Faostat database of agricultural and food products. It has not been possible to use the Eurostat Cronos database because of the incompleteness of available data. The Faostat database for consumption contains series of data on quantities consumed until 2005, while data on quantities produced have been updated through 2006. This makes it more difficult to analyse the enlarged EU 25 because there are only two observations for consumption. However, it is useful to recall that data on production and consumption of the EU-25 do not differ largely from the EU-15, with the only exception of apples and strawberries for fruits and cabbages for vegetables. Therefore confining the study to the EU-15 aggregate does not introduce a large distortion to the analysis.

The analysis on EU consumption and production of F&V has been performed on all fresh F&V covered by the EP and ER schemes, as listed in Tab. 1 - Part A and Tab. 2 (Chap.1) and on all F&V chosen for the counterfactual analysis (Tab. 3 of Chap. 1) with the sole exception of courgettes, not included in the Faostat database. In order to have a broader view of the consumption and production of vegetables, we also analysed: potatoes, green peas, mushrooms and truffles, garlic, cauliflowers and broccoli, cabbages and other brassicas, lettuce and chicory, for a total of twelve products. For the above mentioned fresh F&V products, percentage changes of consumption and production for the period 1995-2005 were calculated, the three year averages referring to 1995-97, 1999-2001 and 2003-05.Total fresh fruit production increased from 1995-97 to 1999-2001, decreasing in the following sub-period. Regarding single products, there were increases in production in both periods considered in the analysis for six products out of a total of fifteen. The other products recorded an increase in the first period and a decrease in the second, while only watermelons had a decrease in the first period and an increase in the second.

The production of fresh vegetables showed an increase in both periods, although in the second it was rather low. The production of tomatoes, lettuce and green peppers increased in both sub-periods under review, while that of cabbage and green peas fell. Other products, with the exception of cauliflowers and asparagus, rose slightly in the first period and fell in the second.

As far as the consumption of fruit is concerned, the quantity consumed increased in both sub-periods, although in the second the increase was very low. The majority of observed products (ten out of fifteen) posted an increase in consumption in both periods, while apples, peaches and nectarines, lemons, grapes and strawberries had an increase in the period from 1995-97 to 1999-2001, and consumption diminished in the following period from 1999-2001 to 2003-05.

Trends in the consumption of vegetables followed a pattern similar to that shown by fruits. Increases in consumption in both sub-periods were observed for seven products out of twelve (tomatoes, garlic, mushrooms, green beans, peppers, lettuce and asparagus), while the consumption of cabbages and green peas decreased in both periods. The other three products had mixed performances.

Overall, in the period under review EU-15 total production for both fruits and vegetables increased more than the total consumption in the first sub-period, while the growth in consumption was larger than production in the second period, giving rise to a reduction/increase in surpluses/deficit in trade. This trend was particularly evident in the case of the two most important products, apples and oranges, whose share of production over total consumption decreased more than the total recorded for fruits.

Tab. 11 - F&V consumption and production trends in the EU in the period 1995-2005.

		Average yearly % change				*Average yearly percentage change*	
		1995/7-1999/01	1999/1-2003/5			1995/7-1999/01	1999/1-2003/5
Apples	Production	*2.5*	*-5.8*	Tomatoes	Production	*4.2*	*0.7*
	Consumption	*2.3*	*-0.9*		Consumption	*2.9*	*1.2*
	% Prod/Cons	*0.2*	*-5.0*		% Prod/Cons	*1.3*	*-0.5*
Pears + quinces	Production	*2.0*	*1.1*	Artichokes	Production	*0.2*	*-2.0*
	Consumption	*1.6*	*0.7*		Consumption	*0.7*	*-2.6*
	% Prod/Cons	*0.4*	*0.3*		% Prod/Cons	*-0.5*	*0.7*
Oranges	Production	*1.6*	*0.3*	Cucumbers and gherkins	Production	*-0.8*	*2.4*
	Consumption	*3.7*	*2.5*		Consumption	*-0.7*	*1.3*
	% Prod/Cons	*-1.9*	*-2.1*		% Prod/Cons	*-0.1*	*1.1*
Lemons and limes	Production	*3.7*	*-2.2*	Garlic	Production	*0.7*	*-1.7*
	Consumption	*3.5*	*-8.4*		Consumption	*0.7*	*0.1*
	% Prod/Cons	*-0.9*	*8.8*		% Prod/Cons	*0.0*	*-1.8*
Grapes	Production	*2.0*	*-1.0*	Mushrooms and truffles	Production	*3.0*	*-0.3*
	Consumption	*0.0*	*-0.6*		Consumption	*3.8*	*2.7*
	% Prod/Cons	*2.0*	*-0.4*		% Prod/Cons	*-1.1*	*-1.7*
Tangerines, mandarins	Production	*2.5*	*2.9*	Cauliflowers and broccoli	Production	*-0.9*	*0.9*
	Consumption	*3.3*	*3.7*		Consumption	*-1.9*	*0.5*
	% Prod/Cons	*-0.7*	*-0.8*		% Prod/Cons	*1.0*	*0.5*
Peaches and nectarines	Production	*3.7*	*-3.1*	Cabbages and other brassicas	Production	*-1.4*	*-1.9*
	Consumption p+q	*1.4*	*-2.1*		Consumption	*-1.3*	*-1.4*
	% Prod/Cons	*2.2*	*-1.1*		% Prod/Cons	*-0.1*	*-0.5*
Apricolts	Production	*4.9*	*-0.9*	Lettuce and chicory	Production	*0.6*	*0.1*
	Consumption	*4.1*	*1.1*		Consumption	*1.2*	*0.2*
	% Prod/Cons	*0.7*	*-2.2*		% Prod/Cons	*-0.5*	*-0.1*
Plums and sloes	Production	*2.4*	*-7.8*	Chillies and peppers, green	Production	*2.5*	*2.4*
	Consumption	*1.8*	*1.4*		Consumption	*3.4*	*2.2*
	% Prod/Cons	*0.7*	*-9.0*		% Prod/Cons	*-0.8*	*0.1*
Cherries	Production	*3.6*	*-8.3*	Beans, green	Production	*1.2*	*-1.1*
	Consumption	*0.7*	*0.3*		Consumption	*1.2*	*1.1*
	% Prod/Cons	*2.5*	*-8.5*		% Prod/Cons	*0.0*	*-2.2*
Grapefruits	Production	*2.2*	*3.0*	Asparagus	Production	*-0.2*	*1.2*
	Consumption	*5.6*	*5.2*		Consumption	*0.4*	*2.7*
	% Prod/Cons	*-3.4*	*-2.1*		% Prod/Cons	*-0.6*	*-1.5*
Kiwifruits	Production	*2.8*	*2.6*	Green peas	Production	*-2.5*	*-9.3*
	Consumption	*2.7*	*2.9*		Consumption	*-1.4*	*-3.5*
	% Prod/Cons	*0.3*	*-0.4*		% Prod/Cons	*-1.1*	*-6.1*
Watermelons	Production	*-1.0*	*1.7*				
	Consumption	*0.2*	*2.3*				
	% Prod/Cons	*-1.2*	*-0.6*				
Other melons	Production	*2.6*	*0.7*				
	Consumption	*1.6*	*0.7*				
	% Prod/Cons	*1.0*	*-0.1*				
Strawberries	Production	*4.9*	*-1.1*				
	Consumption	*3.3*	*-1.1*				
	% Prod/Cons	*1.5*	*-0.1*				
All fruits	Production	*2.2*	*-1.5*	All Vegetables	Production	*1.9*	*0.1*
	Consumption	*1.3*	*0.1*		Consumption	*1.5*	*0.7*
	% Prod/Cons	*0.9*	*-1.5*		% Prod/Cons	*0.4*	*-0.5*

Source: FAOSTAT Database

In the case of vegetables the production to total consumption ratio fell in both periods for five products (mushrooms, cabbages, lettuce, asparagus and green peas) and rose only in the case of cauliflowers.

Further insights can be gained putting together production and consumption of F&V with and without EP, as well as production and consumption of F&V with and without ER.

It can be seen that for fruit products covered by EP, in the first period from 1995-97 to 1999-01 production increased faster than consumption; this change resulted in a larger surplus/lower deficit in trade of such fruit. In the second period from 1999-01 to 2003-05, production of fruit with EP decreased faster than consumption, reducing surpluses/increasing deficits. In the case of fruit without EP in both sub-periods production increased but at a lower rate than consumption, resulting in an increase in deficit/lowering of surpluses in trade. Production of vegetables with EP increased more than consumption in both periods, while vegetables without EP showed a larger variation in consumption than production.

Arranging products according to the availability of ER, in the first period from 1995-97 to 1999-01 production of fruit increased faster than consumption, giving a larger surpluses/lower deficits in trade. In the second period from 1999-01 to 2003-05, production of fruit with ER decreased faster than consumption, reducing surpluses/increasing the deficits. In the case of fruit without ER production increased faster than consumption in the first sub-period and at a lower rate than consumption in the second. Production of vegetables with ER increased by more than consumption in the first sub-period, while the opposite occurred in the second. Vegetables without ER recorded decreases in production in both periods, while consumption showed a slightly increase.

Therefore F&V with EP and ER show changes in production and consumption that are not uniform according to the kind of border measures adopted by the EU in regulating their trade.

2.2.2 Prices of domestic and imported products

Price competition is believed to be one of the most important factors in determining the evolution of trade, particularly in the case of agricultural products. This part of the preparatory analysis was aimed at identifying major changes in price levels of domestic and imported fresh F&V in order to find possible causes shaping EU import patterns, while the analysis of prices of EU exports of F&V is developed in the paragraph 2.5.

The analysis of prices of F&V would require to study a large number of products, varieties and qualities. Furthermore, reduced storability makes it difficult to move products over long distances, for this reason many products are traded mainly within regional markets. These features of F&V markets make the analysis of price trends in world markets particularly difficult, because it requires a wide availability of data that very often is not given. For these reasons our analysis has been confined to prices of domestic and imported products gathered by the EU Commission offices when managing market intervention according to F&V CMO rules. Prices of domestic products are collected from several markets in EU countries and refer to different qualities identified by variety and size. Since the analysis is aimed at finding the main trends characterising prices, we used monthly average prices at the EU level as published in the Agriview framework.

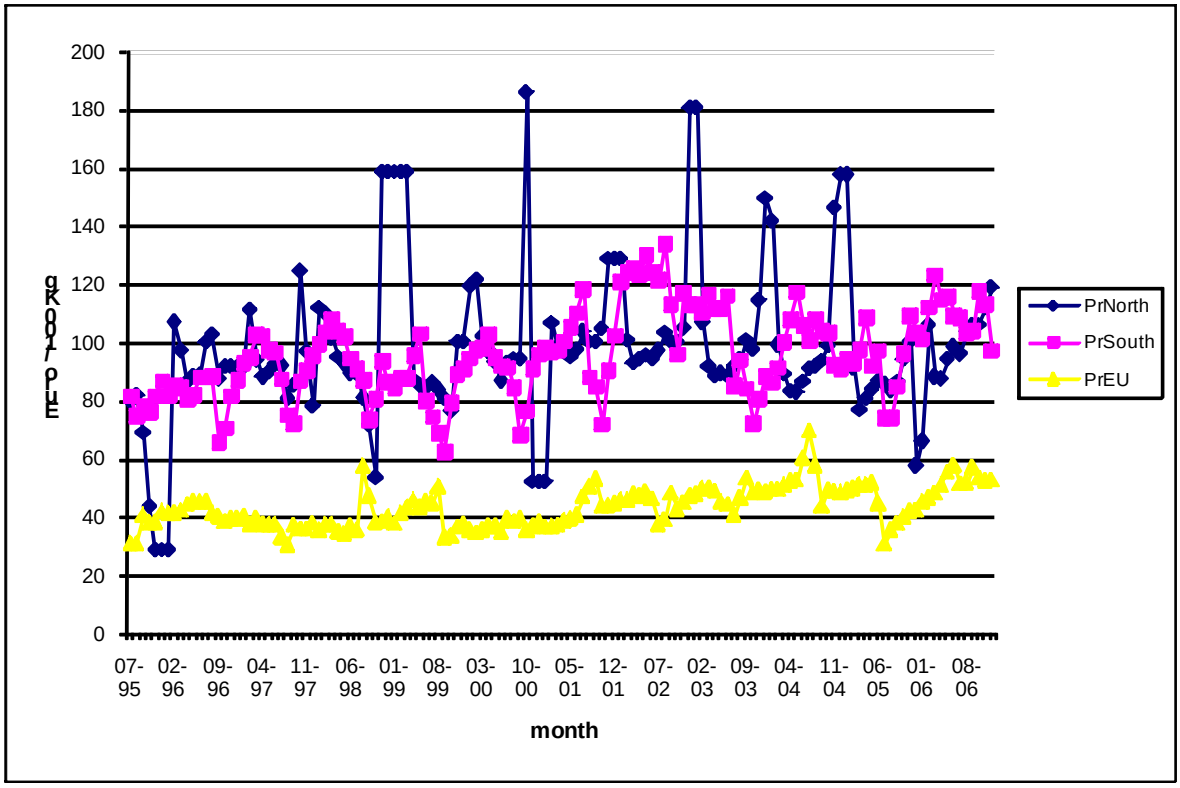
Given the difficulties of gathering reliable price series of F&V outside the EU, we used daily prices of imported F&V collected by the Commission's offices within the management of the EP scheme in order to calculate daily SIVs. Using the Access database on representative prices, daily prices observed on the EU representative market weighted by quantity traded were used to calculate a monthly average price of imported products. Because these prices are only collected within the management of the EP scheme they are available only for products covered by the EP. Therefore, the analysis has been performed only for the products chosen for the counterfactual analysis of the EP, as listed in Tab. 3 (chap. 1), with the exception of artichokes, for which prices of domestic products are not available in the Agriview database. In the case of apples, pears, oranges and table grapes for which imports from southern hemisphere countries are relevant, we have calculated a price index for products imported from both northern and southern hemisphere countries. This distinction is aimed at taking into account the different seasonal pattern and impact on prices of EU domestic production of imports from these two areas.

The data used in this analysis have the merit of overcoming the difficulties linked to the collection of prices outside the EU, but have the limitation that prices of imported apples have been collected on wholesale markets closer to the end user, while EU prices are collected on markets closer to the farm. Therefore the two prices reflect distributive margins referring to non-homogeneous levels of the marketing chain; this should be taken into account when reading the results of price comparisons. However, the analysis is still able to give insights about the role of prices in trade changes.

Fig. 3 shows the price of apples produced in the EU and prices of imported apples from southern hemisphere countries (mainly Argentina, Brazil, Chile, New Zealand, South Africa and Uruguay) and northern hemisphere countries (mainly China, Canada, and US). Prices of EU apples are lower than imported apples; this difference is partly due to the already recalled differences in the market level to which the prices refer. However, it is also possible that part of this divergence may reflect differences in the products characteristics[9]. In fact, the main exporting countries of apples in the EU, both in the northern and the southern hemisphere, are rather far from the EU. Therefore transportation costs of such exports are rather relevant and must be compensated by a higher unit value of exported products.

Prices of apples produced in the EU show a slight but significant upward trend. On the other hand, prices of apples imported from southern hemisphere countries also show a significant upward trend, with a magnitude not different from the one observed for EU prices, while prices of imported apples from the northern hemisphere countries show a downward trend. The exports trend of Chinas' apples to EU appears decreasing although their volume share is high, becoming increasing and relevant after 2000. This is mainly due to the decreasing prices of those apples.

Fig. 3 - Monthly prices of EU apples and of imported apples from Southern and Northern hemisphere countries



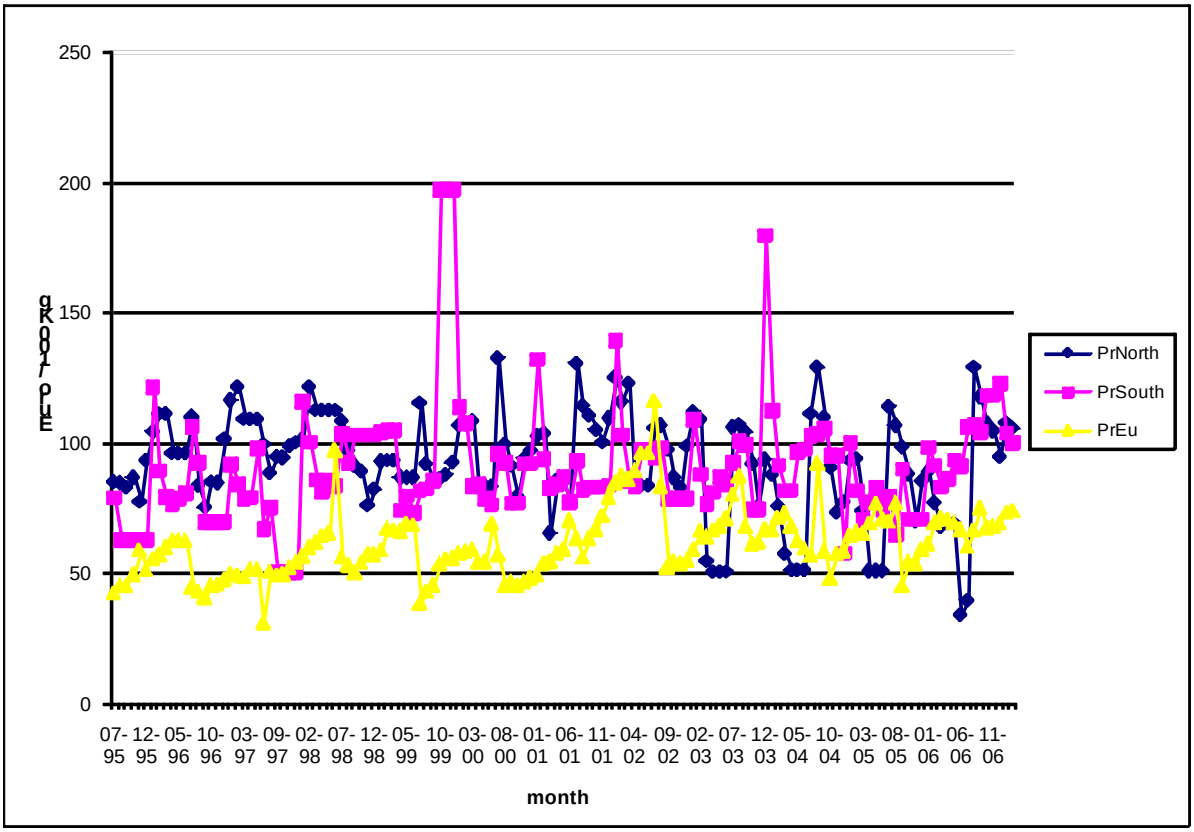
Source: Agriview framework processed by Agrosynergie

Prices of imported pears, both originating from northern and southern hemisphere countries, are generally higher than prices of domestic EU pears. Fig. 4 shows that prices of imported pears remain constant for the whole period under review, although they are characterised by a high variability. From 2002 prices of pears produced in the EU show an increasing trend, with prices particularly high in 2002.

The trends shown in the figure are also confirmed by regression analysis: trends for the two series of prices of imported apples are statistically insignificant, while the trend for the EU domestic price of pears is positive and statistically significant.

[9] The effects of transportation costs on the international trade of high quality products are discussed by Hummel, D. and Skiba, A. "Shipping the good apples out? An empirical confirmation of the Alchian-Allen conjecture". Journal of Political Economy, 2004, vol. 112, no. 6.

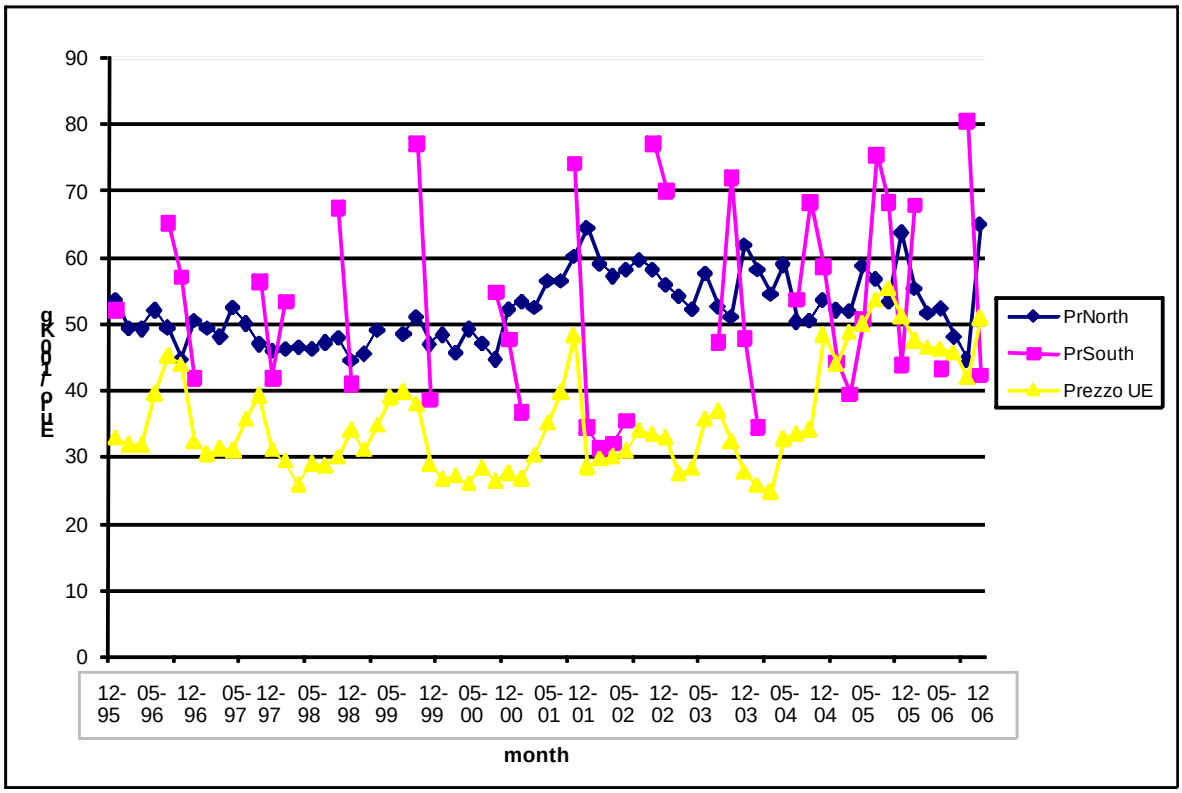
Fig. 4 - Monthly prices of EU pears and of imported pears from Southern and Northern hemisphere countries



Source: Agriview framework, processed by Agrosynergie

Fig. 5 shows the series of monthly prices of oranges from 1995 to 2006 registered in the six months from December to May, when the EP is in place. They refer to the prices of oranges produced in the EU and oranges imported from both northern and southern hemisphere countries. Therefore the latter prices are related only to the beginning and the end of their marketing season in the EU. Prices of oranges imported from northern hemisphere countries are always higher than the series of prices of EU domestic production, while prices of oranges imported from southern hemisphere countries have their maximum at the beginning of their marketing season. In recent years they have been lower than EU oranges prices at the end of the marketing season. The two series of prices are characterised by increasing trends, with the coefficient of the EU domestic price slightly higher than that of the imported price, meaning a more favourable evolution of prices. The increase in price of EU domestic production of oranges has been larger over the last two years.

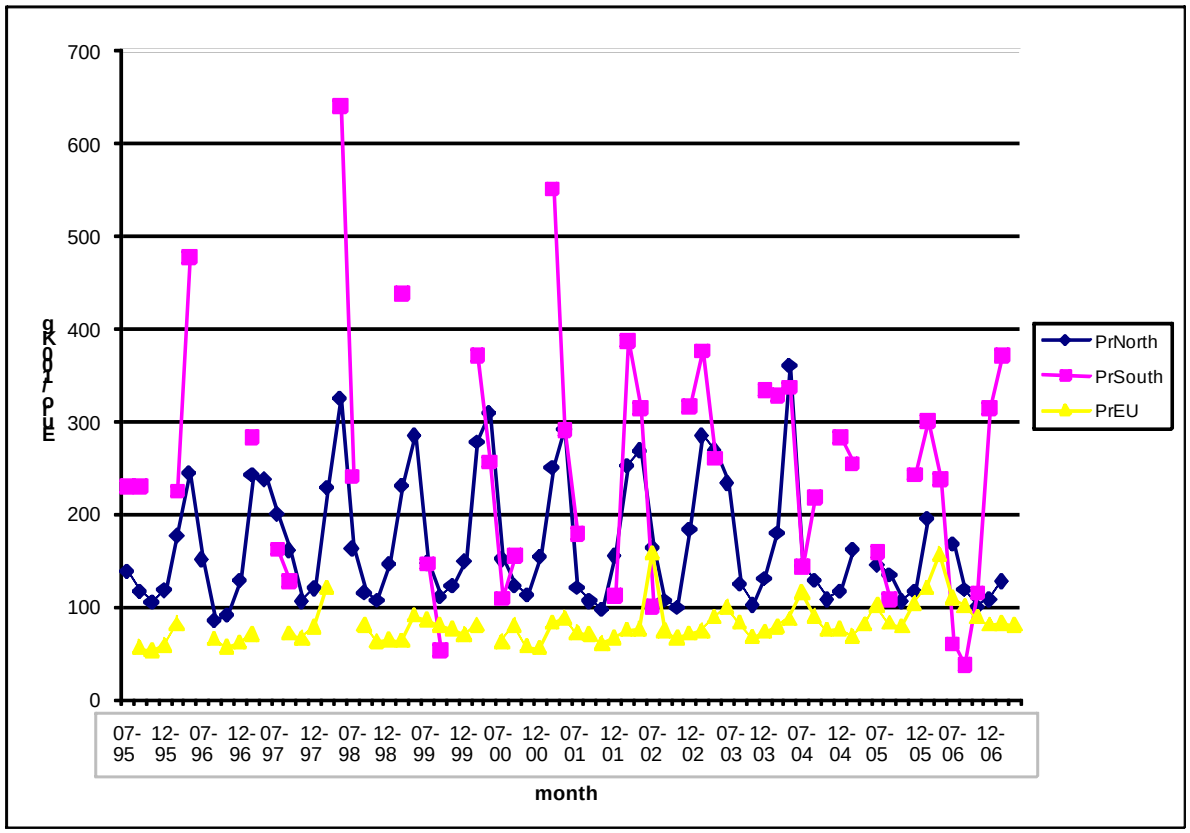
Fig. 5 - Monthly prices of EU oranges and of imported oranges from Southern and Northern hemisphere countries



Source: Agriview framework, processed by Agrosynergie

Monthly prices of table grapes from 1995 to 2006 collected in the six months from July to December are shown in Fig. 6. Also for table grapes we calculated monthly average prices of product imported from northern and southern hemisphere countries that were compared with EU production prices. Table grapes prices of imported products for most of the analysed period are much higher than EU domestic production prices. However, by 2002 EU production prices showed an increasing trend, approaching the price levels of table grapes imported by northern hemisphere countries. This pattern is also confirmed by regressions: while the price of table grapes imported from northern hemisphere countries have remained stable, EU production prices have had a positive (increasing) and statistically significant trend.

Fig. 6 - Monthly prices of EU table grapes and of imported table grapes from Southern and Northern hemisphere countries

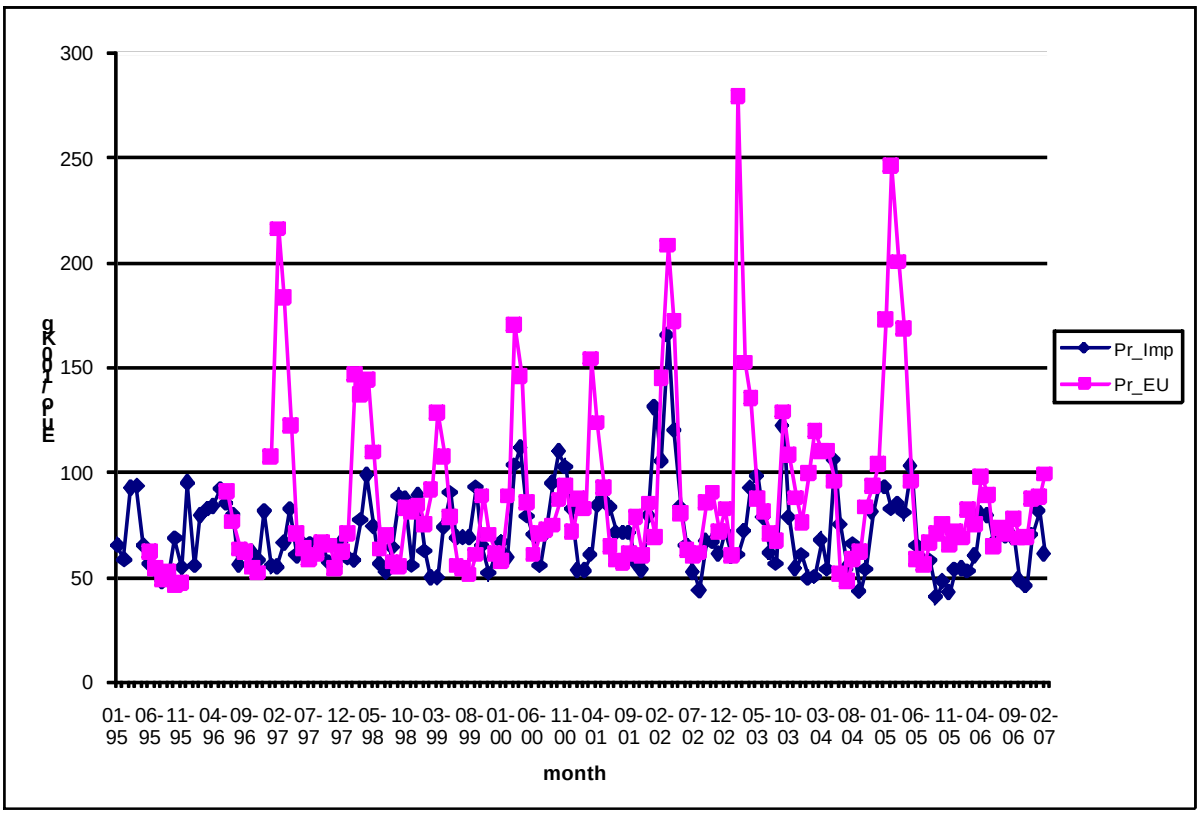


Source: Agriview framework, processed by Agrosynergie

The analysis on monthly prices of vegetables does not make the distinction of origin within imported products because most imported vegetables come from northern hemisphere countries.

Fig. 7 shows the monthly prices of tomatoes produced in the EU and of imported tomatoes from 1995 to 2006. The figure shows that EU domestic production prices are often higher than imported products that are on the same level of average. This is due to the fact that EU prices are characterised by peaks at the end of winter and are related to the first tomatoes produced under greenhouses arriving on the market at the beginning of the season. Although prices of EU tomatoes as well as of imported tomatoes are characterized by a high variability from one month to the other, in the period under review they remained constant around the average level. This is also confirmed by regressions of prices over time, meaning that the two price ratios remained unchanged.

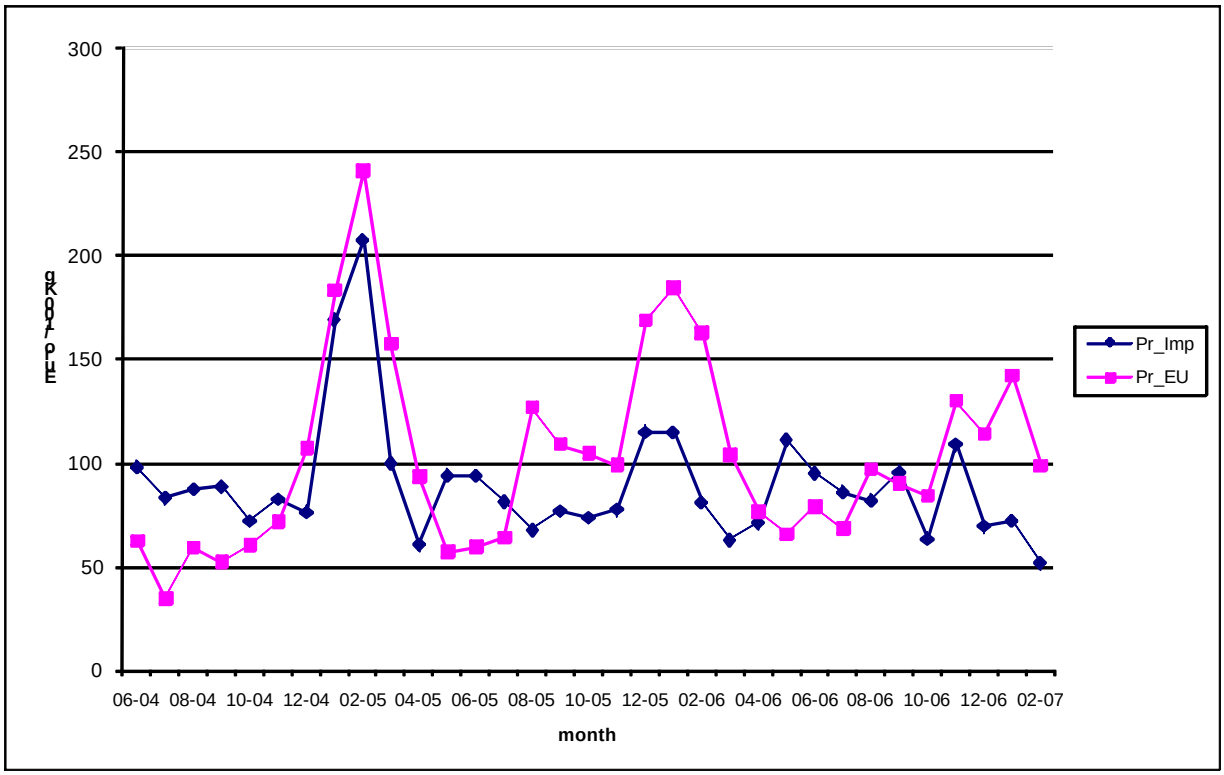
Fig. 7 - Monthly prices of EU and imported tomatoes



Source: Agriview framework, processed by Agrosynergie

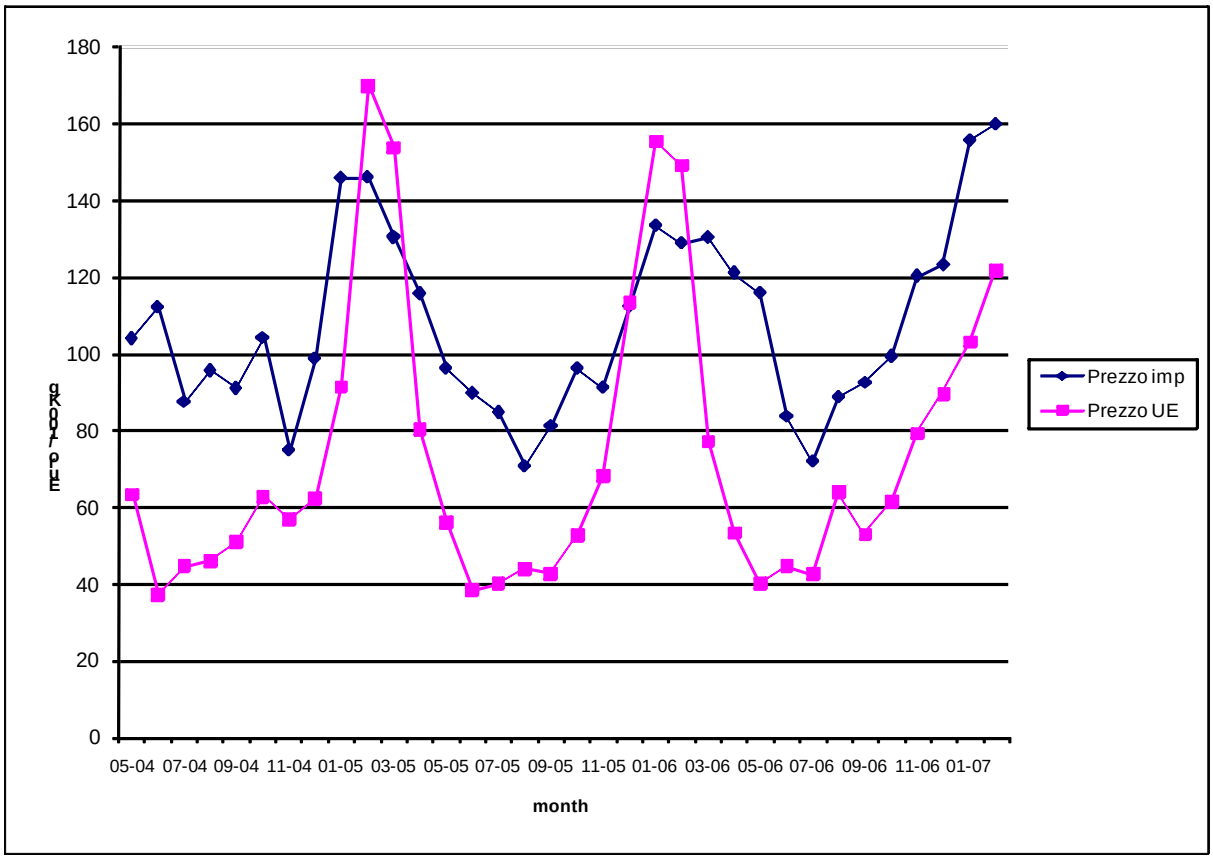
The analysis of courgette and cucumber prices is limited to the period from June 2004 to February 2007, the only months for which the Agriview database has available data. Prices of courgettes and cucumbers are characterised by a well defined seasonal pattern. On average prices of EU produced cucumbers are lower than prices of imported ones, with the sole exception of the end of winter months. Prices of EU produced courgettes are always higher than imported products, with few exceptions. The seasonal cycle of courgettes prices have appeared smoother over last year. The series of cucumber and courgette prices appear stable.

Fig. 8 - Monthly prices of EU and imported courgettes



Source: Agriview framework, processed by Agrosynergie

Fig. 9 - Monthly prices of EU and imported cucumbers



Source: Agriview framework, processed by Agrosynergie

2.3 Analysis of the implementation of EPS

One of the main points of the analysis of the Entry price system (EPS) is the assessment and evaluation of its effects on the management of imports of F&V from third countries. The most relevant aim of the EP scheme, is to preserve trade with third countries while contributing to avoid large price drops on the EU internal market in order to avoid market crises. A reasonable hypothesis to verify in this analysis is whether the EPS works in such a way that, when imports have a price lower than the trigger EP, the payment of the specific duty – i.e. the maximum tariff equivalent - should make these imports no longer convenient. If this hypothesis is true, imports of F&V from an origin country at a price lower than the trigger EP would become non competitive, while it is still possible to import at a higher price if this is the case.

To verify whether the assumption made about the EP system is correct, it would be necessary to have direct information from EU customs offices relating to the occurrence of imports of F&V in the EU paying the specific duty. Moreover, because the case of a SIV lower than EP is an indicator of the possibility of payment of the specific duty, it would be useful to know whether in such cases there are imports and what duty is actually paid.

Unfortunately, such information is not available; therefore, to verify whether imports at prices lower than EP occurred, we have looked at the behaviour of daily SIVs, cross-checking this information with the examination of import data (volumes and values). The comparison of SIV with the trigger EP is useful in signalling possible situations in which the specific duty should be paid and therefore imports would be convenient only if the actual sale was then effected at higher prices.

The pattern of the time series of imports of F&V with EP would supplement this analysis, providing insights into the possible presence of imports when SIVs are below the trigger EP.

2.3.1 Comparison of daily SIVs with EP for products and partner countries

Daily SIVs for each product under the EP scheme, as listed in Tab. 1 (chap. 1), and for all partner countries published in the Official Journal of the European Union have been compared with the trigger EP in force on the day of publication for the period from 1/1/1995 to 31/12/2006. For products imported from Southern Mediterranean Countries benefiting from a preferential entry price, their SIVs have been compared with the trigger preferential EP. Elementary data used in the analysis come from the database on SIVs provided by the Commission offices for the present evaluation.

For each product, the tables presented in the Annex to the Preparatory Analysis report the summary of data on total reported SIVs of each partner country and of SIVs of that country exceeding the trigger Entry Price. The tables for all F&V products within the EP scheme are enclosed in the Annexes to the Preparatory Analysis.

Apples

This product has the largest number of SIVs recorded in the database (15.550). The total number of SIVs breaking the trigger EP is 944, corresponding to 6% of the total. Breaking SIVs are concentrated in apples imported from Poland (479) before the accession of this country to the EU. Almost 80% of SIVs of apples from Poland were below the trigger EP. SIVs of apples imported from other Central and Eastern European Countries (CEEC) are very often lower than the trigger EP: Bulgaria (5 out of 5), Hungary (103 out of 300) and Macedonia (11 out of 13).

SIVs of apples from other partner countries show a number of breaking SIVs that on average is around 3 - 4% of the total, with a larger share of breaking SIVs for Uruguay (38 out of 487) and a smaller one for the US (5 out of 2634). Not taking into account SIVs of apples imported from CEEC, the number of breaking cases is rather small and is rather evenly distributed among the different years, with a peak in 2005 (80 out of 1441).

Apricots

For apricots, the database includes only 515 recorded SIVs. The number of cases of SIVs breaking the trigger EP was just 23. The country with the largest number of recorded SIVs is Turkey, for which there is only one case of breaking. Hungary, in the period when it was outside the EU, that is up to 2003, had 140 SIVs and 8 breakings. Interesting is the case of Morocco, with 4 recorded SIVs and 4 breakings in 2006. Egypt and Croatia present similar situations, with one SIV and one breaking. The USA have 2 SIVs, both higher than EP.

Artichokes

In total, there are 309 recorded SIVs for artichokes, 295 of which refer to Egypt. The 68 breakings of the trigger EP also refer to Egypt, with the exception of the one mentioned for Morocco. Egypt's cases of trigger EP breakings have become somewhat more frequent in recent years, although there is no clear seasonal pattern. In 2005, 19 out of 27 SIVs were below the trigger EP, while in 2006 the breakings were 20 out of 29 recorded SIVs. Although there is a preferential EP awarded to Morocco, the database includes only one SIV from this country, which is also lower than the trigger preferential EP.

Cherries

For the cherries trigger EP breakings are rare. Out of 1492 recorded SIVs there have been 47 breakings.

The countries with the highest numbers of recorded SIVs are Turkey (545) and the USA (475). Turkey had one breaking and the USA none. The country for which breakings are most frequent is Bulgaria, followed by Romania.

Clementines

Breakings of the trigger EP for clementines are relatively few: only 50 out of 1086 recorded SIVs. 42 out of 50 breakings refer to Turkey, which include 170 SIVs, and therefore the incidence of breaking for this country is about 25%. 7 other breakings refer to Israel, which had 73 SIVs, while for Morocco, which benefits from a preferential EP, only 2 breakings have been recorded out of 866 recorded SIVs.

Courgettes

For zucchini there are 3,460 SIVs recorded, of which 135 break the trigger EP. These breakings are subdivided between Turkey (64 breakings SIV out of a total of 2416) and Morocco (61 out of 932). Most breakings from Turkey were recorded in 1998 (14) and 1999 (35, of which 18 out of 18 in May and 17 out of 21 in August). Breaking SIVs from Morocco have a share larger than other countries although a preferential EP is awarded to this country. They became more frequent after the year 2000. Most breaking SIVs from Morocco were recorded at the end of the period in which the preferential EP was in force or after that period in May, when the MFN EP was in force, increasing from 42.4 to 69.2 Euro per 100 kg.

Cucumbers

In the case of cucumbers there are 2,516 SIVs recorded, of which 217 break the trigger EP. The partner country with the largest SIVs recorded is Turkey, with 57% on the total, but with a relatively small number of SIVs breaking the trigger EP. The most numerous SIVs breaking the trigger EP come from Morocco (71 out of a total of 303), which benefits from a preferential EP, reduced by a percentage ranging from 34.3% to 25.8%. It is worth observing that a large share of breaking SIVs from Morocco were recorded in 2004 (48 between February and March). A high share of breaking SIVs was also recorded for Bulgaria (42 out of 230), Macedonia (28 out of 36) and Romania (14 out of 16).

Grapes

Grapes is one of the products with the lowest share of breaking SIVs (70 out of a total of 2545 registered). The largest number come from Hungary (33 out of 179) until 2003, while 16 come from Tunisia out of a total of 19 SIVs recorded. Turkey is the country with the largest number of SIVs recorded, but none of them was lower than the trigger EP. Israel and USA too did not have breaking SIVs.

Lemons

For lemons there are 6598 recorded SIVs, about 10% of which appears to be lower than the trigger EP. The country with the largest number of breakings is Argentina, for which about 20% of the SIVs are below the corresponding trigger EP. Also relevant is the share of breakings manifested by imports from Uruguay, while less frequent are breakings for Turkey and South Africa. Breaking SIVs for imported lemons show a certain variability from one year to another. The largest number of breaking SIVs were recorded in 2004 and 2006, moreover the share is relatively high regardless of the partner country. The pattern followed by SIVs breaking the trigger EP seems to suggest that it may be linked to the condition of the EU internal market where, as we have seen in the previous paragraph, consumption diminished considerably while production fell more slowly.

Mandarins

In the case of mandarins the database records few SIVs below the trigger EP (6 out of a total of 2,436 SIVs). Morocco is the partner country with the largest number of breaking SIVs (4 out of 333), while Turkey has one breaking SIV out of a total of 878.

Oranges

For oranges there have been 311 breakings out of 5,852 SIVs. The main country responsible for these is Cuba, which accounts for more than 50% of cases, followed by South Africa. In this latter case, all breakings happen in December, at the beginning of the period in which the EP is working, when imports from South Africa are already ended. The same seasonal pattern is followed by breaking SIVs of Brazil.

Breaking SIVs from Turkey are a relatively small number, 33 out of 1070, with a large share recorded in 1999. It is worth observing that SIVs of oranges imported from Israel and Morocco, both benefiting from a zero TRQ subject to a preferential EP, 25.4% lower than the MFN EP, do not have breakings of the preferential EP. In the case of Egypt, also benefiting from the preferential EP, there were 6 breaking SIVs out of a total of 597.

Peaches

In the case of peaches there are only 8 breaking SIVs out of a total of 531. The distribution of breaking SIVs is: Bulgaria (3 SIV on a total of 4), Turkey (3 out of 479), Romania (1 out of 1) and Macedonia (1 out of 1).

Pears

Pears are one of the products with the least number of SIVs breaking the trigger EP (177 out of 6208 SIVs recorded). The largest share of breakings is related to pears imported from China (101 out of 387). Such breakings are more frequent in spring months. Pears imported from Chile had 39 breakings, concentrated in July 1997 and July-August 2005.

Prunes

Prunes are the product having the largest share of SIVs breaking the trigger EP (867 out of 1845 SIVs recorded) a little less than 50%. Only prunes imported from Israel have a small number of breakings. Among other countries those with the most breaking SIVs are: Hungary (275 out of 444), Bulgaria (66 out of 81), Romania (185 out of 375), Yugoslavia (71 out of 86), Poland (55 out of 77), Bosnia (47 out of 81), Serbia (52 out of 58), Turkey (86 out of 229). There were no breakings among the 50 SIVs of prunes imported from the US.

Tomatoes

In the case of tomatoes imported from Morocco, SIVs lower than the trigger EP are rather frequent (345 out of 1,588 SIVs recorded) and are concentrated in the second half of the commercialization period. Most cases occurred after the end of the period in which the preferential EP is in place, that is, after March, when there is the switch to EP MFN, which is particularly high in April. In fact, the extension of the period of validity of the preferential EP has reduced the occurrence of EP breaking.

For Turkey, SIVs below the trigger EP are very frequent, especially during the first years of application of entry prices. In this case too they are highly concentrated in April, when the trigger MFN EP is higher than in other months. In recent years the number of cases of EP breaking appears to have gone down.

For Tunisia, the number of trigger EP breaking is concentrated at the beginning of the application of the EP regime. However, it must be borne in mind that SIVs related to this country are not very continuous in time.

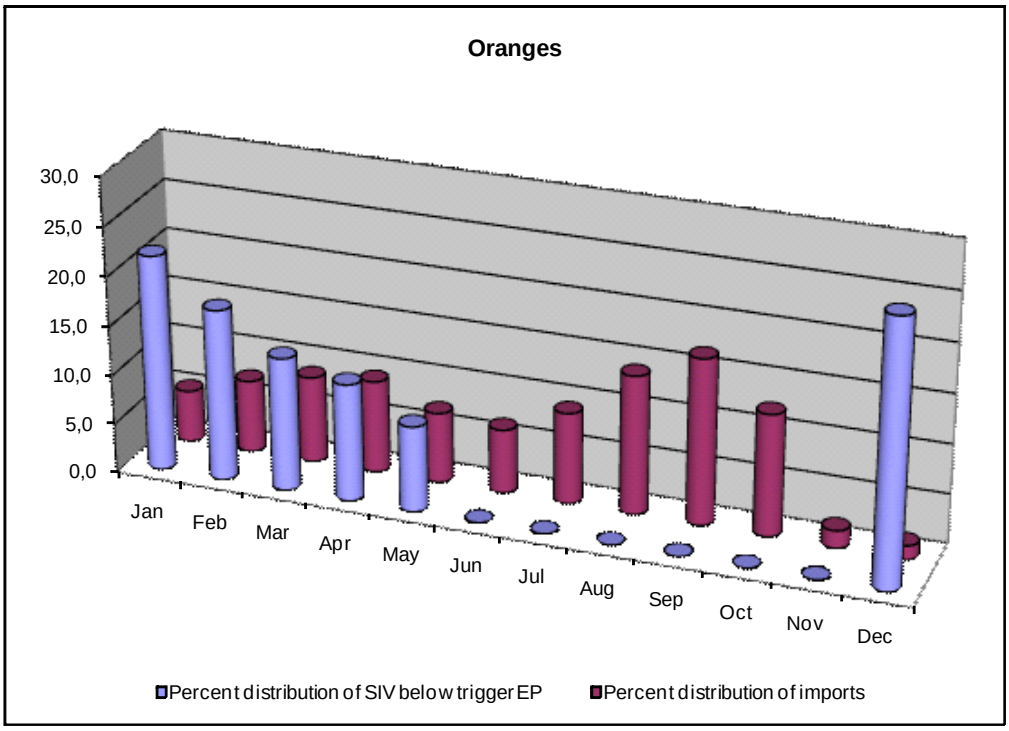
In the case of Israel, trigger EP breakings are relatively rare events, although they seem to become more frequent in later years. What is to be noted is that in the case of breakings, the difference between SIV and EP is larger than for other countries. In this case too the results are based on few observations.

2.3.2 Comparison of the monthly distribution of imports and breaking SIVs

The effectiveness of the EP scheme should be evaluated analysing its capability in controlling imports of F&V at prices lower than the trigger EP. This effect should be created by the fact that the payment of the specific duty in force when SIVs from a partner country are lower than the trigger EP should make imports from that country not convenient, because of the relatively large amount of the duty. Given the data available from official statistics, in order to contribute to the analysis of the effectiveness of the EP scheme in the sense we defined, it would be useful to compare the distribution of monthly imports of each F&V from third countries with the monthly distribution of SIVs below the trigger EP. Given the large number of products and partner countries, we opted for a more aggregate approach that can nevertheless provide useful insights for the analysis.

The analysis we performed entails identifying distribution by month of the average number of "breaking" SIVs for each product covered by the EP scheme over the period 1995-2006. This distribution is compared with the distribution of average monthly quantities of imports of each product recorded in the period 1995-2006. An example of the distribution for Oranges is depicted in the graph below.

Fig. 10 - Distributions of imports and SIVs below the trigger EP in the oranges sector



Source: Official Journal of the European Union and Agrosynergie elaborations

The pattern followed by the two distributions changes from one product to another according to two factors:

- products with the EP scheme in force all year or in part of the year;
- product for which imports from the southern hemisphere are relevant or not.

Products with EP in force only during part of the year and without significant imports from southern hemisphere countries are mainly vegetables (artichokes). In the case of artichokes, breaking SIVs have the same distribution as imports, are relatively few and do not have a relevant impact on imports, although in recent years their frequency increased.

Products with EP in force only during part of the year and with significant imports from southern hemisphere countries are mainly fruit (apricots, clementines, grapes, mandarins, oranges, peaches, plums). In these cases the two distributions have different patterns: SIVs lower than the trigger EP are mainly due to imports from northern hemisphere countries, for some products from southern countries there are breaking SIVs of products already imported and stored (oranges from South Africa in December). In the case of plums, which as we have seen before have the largest share of breaking SIVs among the products covered by the EP

scheme, most imports (2/3 of the total) are in winter and early spring, while imports made in summer in the period in which the EP is in force are less than 25% of total imports.

In the case of products with the EP in force all year round and without significant imports from southern hemisphere countries (tomatoes and cucumbers), breaking SIVs follow two different patterns. The monthly distribution of tomato imports is determined by the pattern of the preferential EP import quotas. The largest number of breaking SIVs was recorded in April when the MFN EP reached its peak, and the period in which the zero tariff import quota with preferential EP for Morocco had already ended. It must be kept in mind that this situation changed in 2002 when the zero TRQ under preferential EP was extended to April and May, although the monthly quota is smaller than in the previous month. The larger breaking SIVs in April could also refer to products imported at the end of March[10]. However, after the changes introduced in the preferential agreements with Morocco, the number of breaking SIVs has gone down significantly. This is quite understandable considering the fact that the preferential EP granted to Morocco in April is 59.1% lower than the MFN EP.

In the case of cucumbers the distribution of breaking SIVs is rather different from that of imports because the former are concentrated in March and April, while most imports are recorded in Summer months.

In the case of products with the EP in force all year round or during most of the year with significant imports from southern hemisphere countries (apples and pears), most imports are in spring, with an early starting month for pears, while breaking SIVs are concentrated in Autumn. Irrespective of apples imported from the above mentioned (Para. 2.3) Central and Eastern European Countries (CEEC), breaking SIVs of apples and pears from southern hemisphere countries are recorded in periods in which imports are already ended, and refer to products stored and sold on the market later. It is also possible that the availability on the market of the fresher EU supply in late summer, autumn contributes to the reduction of prices of the imported product.

2.3.3 Trends in daily SIVs

To complement the analyses developed in the two previous paragraphs it is useful to investigate the trends followed by the SIVs published for the products and the main origin countries chosen for the counterfactual analysis, as listed in Tab. 3 (chapter 1). Given the large number of SIVs lower than the trigger EP characterising the imports of lemons, we have also examined SIVs trends for this product.

The analysis has been conduced calculating for each daily SIV the percentage difference between such SIV and the relevant trigger EP. Such values have been represented in diagrams showing their level and the period they refer to. This graphical analysis allows the identification of:

- daily SIVs trends;
- the distance of SIVs from the daily trigger EP and the frequency of SIVs below the trigger EP
- the length of periods in which the SIVs remain below the trigger EP.

Details on the statistical analysis are presented in the Annex to the Preparatory Analysis – Para. "3. Analysis of the implementation of EP".

Apples

The percentage differences between the daily SIVs and the trigger EP of imported apples increased in the cases of New Zealand, USA and South Africa, but remained quite constant for Argentina, Brazil and Chile. The daily SIVs of apples imported from China were falling and approaching the trigger EP.

In general SIVs lower than the trigger EP are relatively few and are concentrated in some years. It is possible to note that when SIVs become lower than the trigger EP they remain in this condition for more days. Moreover this happens more frequently at the end of the marketing season for apples imported from southern

[10] Before 2002, the number of SIVs lower than the trigger EP of tomatoes registered in March was very small - with the only exception of 1999, while SIVs in April were always below the trigger EP.

hemisphere countries. The figures also show a U-shaped seasonal pattern of the percentage difference of SIVs and trigger EP induced by the reduction of the MFN trigger EP by July 1st of each year.

SIVs lower than the trigger EP of apples imported from China were relatively frequent in September 2005. Another feature of these data is their variability, many SIVs lower than EP are scattered and isolated during the year.

Oranges

The differences between the daily SIVs of oranges and their trigger EP of Egypt, Morocco and Israel are characterised by an increasing trend over the period under review. In the case of oranges imported from Turkey the trend increased over the first part of the period and subsequently fell. SIVs lower than the trigger EP are registered only for oranges imported from Egypt and Turkey.

In the case of oranges imported from South Africa there are few observations because most of the marketing season of this fruit is in periods in which the EP scheme is not in force. For this reason there are many cases in which SIVs are lower than the trigger EP.

Pears

SIVs of pears imported from Argentina, Chile and China show a decreasing trend approaching the trigger EP. However only in the case of China SIVs below the trigger EP are rather frequent, while in the case of Chile this event was registered continuously for a long period in the summer of 2005.

Also the percentage differences between SIVs and trigger EP are characterised by a U shaped seasonal pattern induced by the distribution of the MFN trigger EP.

Table grapes

We have already stressed that table grapes are one of the products with the lowest number of SIVs below the trigger EP. The percentage differences of SIVs and the trigger EP for the different origin countries does not show a clear trend. SIVs of table grapes imported from Israel, Turkey and USA are always higher than the trigger EP. However in the case of Turkey the distance of SIVs from the trigger EP is much lower than that displayed by imports from the USA, and in some years has been rather close to it.

Lemons

The analysis of breaking SIVs has underlined the fact that lemons is one of the products exerting the most pressure on the EP system. The figures, presented in the Annex to the Preparatory Analysis, show that the percentage differences between SIVs and trigger EP of the main partner countries are close to zero, and are negative for many countries regardless of the geographic area in which they are located. Furthermore, when the difference becomes negative it remains in this condition for long periods.

The pattern showed by SIVs for lemons in the five main partner countries seems constant over the whole period under review, and the difference with the trigger EP does not change over time.

Artichokes

The graph relating to the percentage difference of SIVs with the trigger EP reports only data related to Egypt, because the SIVs of other countries are very few, and their representation is of no relevance. The index shown in the graph has a clear downward trend. Starting with a large difference of SIVs with the trigger EP, by 2002 the difference narrowed considerably, and in many cases there were negative values. Moreover, while at the beginning of the period analysed negative differences were very few, in recent years not only have their numbers increased but they have remained negative for a long time.

Courgettes

The percentage difference between SIVs and the trigger EP of imports of courgettes from Turkey show an increasing trend with negative differences concentrated in the first years of implementation of the EP scheme. In the case of Morocco the percentage difference is decreasing and SIVs lower than the trigger EP are distributed all years mainly at the end of the marketing season.

Cucumbers

There are relatively few SIVs for cucumbers. The largest number refers to imports from Turkey that show an increasing trend of percentage differences between SIVs and the trigger EP. However the number of SIVs below the trigger EP is rather frequent but does not show a regular pattern.

Tomatoes

The analysis of trends in percentage differences between the SIVs of imported tomatoes and of trigger entry prices has been carried out for Morocco, Israel and Turkey. The first observations that can be made on the distribution of these series is their wide variability and the lack of a clear trend. The number of negative values for this index is relatively high, particularly for Morocco, while in the case of Turkey their number is lower. It is worth underlining that often these differences are rather large for both countries. Moreover in the case of Morocco the SIVs often remain below the trigger EP for several days.

We have already underlined that before the changes introduced in the preferential agreement with Morocco, in April when the MFN trigger EP was applied SIVs were always lower than the trigger EP. However a large number of negative differences are also observed in other months, particularly in November. These patterns of SIVs imported from Morocco deserve further analysis regarding the relationship with prices of EU domestic products, something that will be developed within Theme 1.

2.3.4 Remarks on the comparison of daily SIVs with EP for products and partner countries

Analysis of the distribution of SIVs below the trigger EP has shown a different situation according to the country of origin and the products considered. Imports from the above mentioned CEEC[11] show the largest number of SIVs lower than the trigger EP. It seems that the system is (was) unable to avoid such imports.

Regarding imports from other countries we have to divide northern hemisphere partner countries from those in the southern hemisphere. In the first group there are countries like the US or Canada, with very few breaking SIVs. For countries closer to EU borders the situation changes according to the product. There are products, like all citrus fruits with the exception of lemons, in which there are almost no breaking SIVs for imports from Morocco, Turkey and Egypt. The same is observed for cherries and grapes imported from Turkey. Probably these products have higher prices because they are sold on more affluent EU markets, that are also more distant from the production area.

In the case of zucchini and tomatoes breaking SIVs are more frequent, especially in periods when the internal supply is also available on the EU market.

In the case of imports from the southern hemisphere the breaking SIVs are relatively less frequent and are generally observed in periods in which imports are ended while products already stored are on sale in the EU market.

[11] As indicated in the para. 2.3, for each product: Bulgaria, Hungary and Macedonia for apples; Hungary and Croatia for apricots; Bulgaria and Romania for cherries; etc.

2.4 Development of EU exports and export refund trends

The decrease in export refunds for most F&V was dramatic during the period of implementation of Uruguay Round (URAA) commitments. Thus, in the marketing year 2002/2003, once the period of implementation of the UR had come to an end, the budgetary outlays and subsidized exports of F&V were as follows:

Tab. 12 - Export refunds expenditures for F&V products. Marketing years 2002/2003

	Subsidised exports		Annual commitment levels	
Description of products	Outlays (Mio ECU)	Quantity ('000 t)	Outlays (Mio ECU)	Quantity ('000 t)
Fruit and vegetables, fresh	15.3	711	52.8	753.4
Fruit and vegetables, processed	3.1	66.9	8.3	143.3
Fruit and vegetables, fresh	Percentage of commitment levels (%)		27	94
Fruit and vegetables, processed			37	47

Source: WTO, Notification by the European Communities

Once the period of implementation of the URAA was at an end, the total expenditure for EU15 had reached 27% of the ceiling for fresh F&V and 37% for processed F&V. The downward trend was only broken with the EU enlargement, which involved an increase in ER of certain products, in particular apples. However, the total outlay in the Marketing Year 2005-06 for fresh F&V was 20 million Euros, which is less than 40% of the URAA ceiling.

Tab. 13 presents the growth of exports (in terms of volume) and export refunds for F&V covered by the scheme. Calculations are based on data included in the Annex to the Preparatory Analysis "*Exports and ER*" (Para. "4. Development of EU exports and export refund trends"), based on DG Agri sources.

Tab. 13 - Growth in EU exports and export refunds. Average annual growth rate (%)

	Average annual growth rate (%)							
	Export extra EU (Av. Annual change in %)				Total export refunds EU (Total change in %)			
	EU15			EU25	EU15			EU25
	1999-00	2003-04	2004-05	2005-06	1999-00	2003-04	2004-05	2005-06
Product	1995-96	1999-00	2003-04	2004-05	1995-96	1999-00	2003-04	2004-05
Almonds, shelled	14.8	3.0	15.7	18.5			8.6	-38.7
Hazelnuts, in shell	3.5	-5.6	-14.2	-23.1			-45.7	59.6
Hazelnuts, shelled	5.5	-8.8	52.4	-48.2			83.0	-68.2
Nuts, in shell	3.2	32.9	12.7	0.1			9.7	-10.0
Fresh tomatoes	-2.3	4.2	0.5	21.0	-71.5	2.2	1.4	-28.8
Oranges	-2.2	-0.5	-23.0	20.4	-45.5	-66.7	13.8	-14,6
Lemons	0.1	6.1	0.5	91.7	-92.3	303.2	13.4	-35,7
Table grapes	10.4	0.7	3.9	29.0	-62.9	-13.5	-34.6	-10.7
Apples	0.3	-6.6	9.2	20.4	-32.6	-66.7	124.7	145,1
Peaches&nect	21.4	-10.3	63.6	40.2	41.1			-27.3

Fresh fruits&vegetables	1.7	-1.4	1.4	26.3	23.1	4.7
Cherries preserved	-0.5	-0.9	-15.0	48.7		11.0
Peeled tomatoes	12.0	0.4	-0.4	3.7		-84.8
Glace cherries	-4.2	1.0	1.4	4.6		33.5
Hazelnuts processed	-3.2	2.3	-0.4	8.3		123.4
Orange juice 10-22< + >55	-18,3	5.8	78.7	18.4		
Processed fruits&vegetables	2,9	1.2	12.8	7.2		-75.4
Fresh & Processed	**1.9**	**-1.0**	**3.4**	**26.8**		**-4.3**

Source: COMEXT, DG AGRI, Processed by Agrosynergie

The downward trend is also observed in the percentage of exports covered by ER, as seen in Tab. 14. For total fresh F&V this percentage decreased from 52.9% in 1995-96 to 20% in 2005-06, though the percentage is still over 20% for some products such as hazelnuts, oranges, lemons and apples. For processed F&V the decrease has been even larger, from 30.8% in 1995-96 to 14.2% in 2005-2006.

Tab. 14 - Percentage exports with ER

	EU15			**EU25**	
Product	**1995-96**	**1999-00**	**2003-04**	**2004-05**	**2005-06**
Almonds, shelled	65.6	46.2	30.4	17	14
Hazelnuts, in shell	76.1	42.7	51.7	25.2	80.9
Hazelnuts, shelled	73.9	81.5	58.9	62.1	45.1
Nuts, in shell	48.3	26.8	5.9	5.1	5
Fresh tomatoes	38.7	23.6	15.5	7.5	7.2
Oranges	83.4	91.2	78.4	41.2	42.5
Lemons	70	68.5	52.5	10	14.3
Table grapes	53	30.2	29.5	14.4	10.5
Apples	22.8	23.4	18.4	39.9	34.8
Peaches&nect	29	18.9	0	10.6	4.8
Fresh fruits&vetables	**52.9**	**47.4**	**39.9**	**24.1**	**22.5**
Cherries preserved	73.9	39.7	41.1	33	20
Peeled tomatoes	45.7	37.7	28.4	26.9	17.2
Glace cherries	73.5	22.7	26	22	15.8
Hazelnuts processed	21.2	14.3	8.4	8.4	3.4
Orange juice 10-22< + >55	2.8	0.3	0	0	0
Processed fruits&vetables	**30.8**	**31.8**	**23.5**	**19.3**	**11.9**
Fresh & Processed	**49.6**	**45**	**37.1**	**23.2**	**20.8**

Source: COMEXT, DG AGRI, Processed by Agrosynergie

The assessment of export refunds should be carried out with care. As a preliminary step, we have calculated the percentage change of exports compared with the next policy variables:

- Percentage change of average ER per exported unit.
- Changes in percentage of exports with ER.

We are referring to a "descriptive elasticity". This indicator measures the ratio of the percentage change of total EU exports between two years with respect to changes in the two aforementioned variables. The sign of the indicator measures whether changes in total exports follow the same direction as changes in the ER per exported unit, and in the percentage of exports with ER. Positive signs of such elasticity suggest that an increase (decrease) in the policy variable (ER per exported unit or percentage of exports with ER) was accompanied by an increase (decrease) in exports. Though exports are affected by a complexity of variables, a high frequency of positive signs is indicative of responsiveness of exports with respect to the policy variables.

Tab. 15 summarizes the signs of the elasticities which are presented in the Annex to the Preparatory Analysis "*Exports and ER*" (Para. "4. Development of EU exports and export refund trends"), with the last column referring to changes in EU25 exports while the first three columns refer to EU15 exports. We can see that positive signs occur (as might be expected) but that negative signs also appear for a large number of observations. Thus, out of 44 observations, the elasticity with respect to average unit ER was negative in 20 observations and the elasticity with respect to percentage exports with ER was negative in 24 observations.

Tab. 15 - Sign of elasticity of exports

	With respect to change is unit export refunds:				**With respect to changes in percentage of exports with ER:**			
	1999-00	2003-04	2004-05	2005-06	1999-00	2003-04	2004-05	2005-06
Product	1995-96	1999-00	2003-04	2004-05	1995-96	1999-00	2003-04	2004-05
Almonds, shelled		+	-	-	-	=	+	-
Hazelnuts, in shell		=	=	=	=	=	=	=
Hazelnuts, shelled		=	=	+	+	+	+	+
Nuts, in shell		+	+	-	=	-	-	+
Fresh tomatoes	+	-	-	-	+	-	-	-
Oranges	+	+	-	-	-	+	+	+
Lemons	=	+	-	+	-	-	-	-
Table grapes	-	-	-	-	-	-	-	-
Apples	-	+	+	+	+	+	+	+
Peaches&nect	-	+	+	-	-	+	+	-
Cherries preserved			-	-	+	-	+	-
Peeled tomatoes			-	-	-	-	+	-
Glace cherries			=	=	=	=	+	+
Hazelnuts processed			+	+	+	+	-	-
Orange juice 10-22< + >55					+	-		

Source: COMEXT, DG AGRI, Processed by Agrosynergie

This suggests that export trends might not clearly react to export refund trends. This is not an indication of an exact connection between ER and EU exports. In fact, This ER may have worked to stabilize saturated EU markets, given the perishable nature of fresh F&V and the concentration of exports in certain seasons. However, what emerges from the analysis is that ER has not appeared to be a determinant of export growth for many products.

2.5 The price level on world markets

Assessment of the effects of EP and ER schemes requires an analysis of world prices of F&V products covered by EP or ER, as well as of products not covered by the two schemes in order to perform a counterfactual analysis. This task is not easy to carry out for several reasons. The most important is associated with the identification of world prices, which is rather difficult, due on the one hand to the concept of world price and on the other to the breadth of quality differentiation characterising F&V products.

The world price is a notion associated with the concept of uniqueness of price, it is widely used in agricultural policy analysis as a benchmark to assess the effects of policy programs adopted in a country. Because F&V markets often have a local dimension, prices vary significantly from market to market around the world. They also differ for many other reasons, the most important being: the wide differentiation in product quality expressed by variety, size and also the period in which F&V products are marketed; the very short storability of most of these products and transportation costs. All these factors contribute to the wide spatial variability of F&V prices in a given period. A further problem regarding the price analysis of F&V is related to the market level on which prices are formed: prices at the farm gate, in production markets or in wholesale and retail markets. These prices differ due to marketing costs, which increase the closer they are to the end user.

In addition to the problems linked to the definition of prices, a further difficulty arises from the availability of statistical data on the prices of F&V outside the EU. The large size of the F&V industry and trade flows produces a large number of transactions and prices that often are not systematically recorded. Moreover even if these data were available their meaningful management would be rather complex.

In the analysis of trade policies one way to overcome the difficulties arising from the availability of data on prices is to take into account f.o.b. or c.i.f. prices collected from trade data. In our study data for the most relevant exporting countries and products have been obtained from the Comtrade databases. These data cover imports and exports of all countries and refer to products aggregated according to the HS1992 system. The analysis of these data makes it possible to identify the relationships between the prices at the border of exporting countries as well as the trends that are among the main determinants of changes in trade flows. It also makes it possible to find possible effects caused by trade policies adopted by destination countries. Such analysis has been undertaken on products with or without EP and ER chosen for the counterfactual analysis, as listed in Tab 3 (Chapter 1), with already recalled exception of courgettes whose data are not available in the HS6 trade data aggregation.

2.5.1 World prices of F&V imported by the EU

For F&V imported in the EU under the EP scheme, as well as for those not covered by the scheme, we compared the fob prices of products exported to the EU with the average fob prices of products exported to all other countries. The average fob prices were calculated using the ratio between the value of exports in a year and the corresponding quantity of exported product. Because Comtrade data on the values of trade flows are published in US dollars, f.o.b. prices in Euro were calculated by means of the average exchange rate between Euro and US dollar published by Eurostat.

The two prices may differ because the composition of exports of a partner country to the two destinations may not be homogeneous. There may be several reasons for such different quality composition of exports. One is the willingness to pay for products differentiated according to the quality expressed by consumers of the different countries. Another reason is linked to transportation costs, when the distance from the destination market is large, the increase in the unit value of consignment diminishes the incidence of such costs.

More interestingly for the analysis, prices may also differ because of the effects of trade policies. Some authors have argued that a possible effect of the EP scheme could be a selection of imports of F&V in the EU. This effect could be due to the high specific duty that would have to be paid for imports if imported at prices lower than the trigger EP, creating an incentive to import only higher quality products that can avoid the payment of the specific duty having a higher price. If this hypothesis were true, under the assumption that trade policies of non EU countries do not have selection effects, we should observe fob prices of exports of F&V to the EU being higher than fob prices of the corresponding products destined for other countries. The

analysis applied to time series of fob prices can also give information on the trends of such prices and of their relative changes in the sample period.

For each product identified for the counterfactual analysis of the EP scheme, as listed in Tab. 3, chap. 1, the fob prices of the main exporting country toward the EU have been represented in the following figures. We have included both the fob prices of the product exported to the EU and to other countries. The graphical analysis has been integrated with the calculation of correlation coefficients between fob prices and between prices and time. These correlation coefficients, presented in separate tables, have the aim of helping to identify the main directions of price movements.

For the series of fob prices we also calculated mean, standard deviation and coefficients of variation in order to verify whether there are differences in the price level and in their variability that could be linked to price stabilisation effects caused by the EP scheme. The estimation of the variability index on series of prices without transformation is justified by the fact that, as will be shown in following pages, in most cases the series does not reveal particular trends. The results of the statistical analysis are summarised in the Annex to the Preparatory Analysis (Annex - Para. "5. The price level on world markets").

2.5.1.1 Prices of fruits

Fob prices of apples observed in the main exporting countries toward the EU have been rather constant in Argentina and Brazil, increasing from a relatively low level in Chile and South Africa, decreasing from a high level in New Zealand. Prices of apples destined to the EU and those destined to non EU countries do not show regular differences: (i) they are always very close for the exports of New Zealand, (ii) prices of apples exported to the EU from Argentina and South Africa are higher than the exports to non EU countries, while (iii) the opposite (lower price for exports to EU) is observed for the exports of Brazil and Chile. The price variability of apples exported by these countries does not show a regular pattern according to the partner country of origin.

Details on the statistical analysis are presented in the Annex to the Preparatory Analysis – Para. "5. The price level on world markets".

As far as the price of oranges is concerned, it is possible to distinguish between partner countries whose prices are increasing, particularly Morocco and Egypt, and countries whose fob prices are relatively stable (Argentina and Uruguay) or decreasing (South Africa). In most countries, oranges exported to the EU have prices higher than those exported to other destinations, while in Morocco and Egypt the two prices on average are very close. The variability of fob prices of oranges exported to the EU is generally lower than those destined for other countries with the exception of prices of oranges exported by Egypt.

Fob prices of pears have been increasing from the mid 1990s up to the year 2000, decreasing afterwards. This trend has been different for pears exported by South Africa whose prices have been increasing in the last five years although their initial level (observed in the year 2000) was relatively low. It is particularly interesting to note the trend of prices of pears exported by China, both to the EU and to other countries, which after 1997 fell continuously until 2004. The average fob price level for pears exported to the EU from Argentina and China has been higher than those exported toward non EU countries, while the opposite is observed in the case of pears exported from Chile and South Africa. Price variability does not show differences according to the area of export destination.

The level of fob prices of table grapes exported by most of southern hemisphere countries is high and characterised by an increasing trend in the years until 2000 and by a decrease in the following period. Prices of table grapes exported by Brazil follow a different time pattern, characterised by a steady increase until 2004. Prices of table grapes exported from Egypt are characterised by the largest variability and do not follow a clear trend. The average level of fob prices of pears exported by the observed countries does not show regularities according to the destination.

As far as fruit not covered by the EP scheme is concerned (grapefruits, melons, kiwi and strawberries), fob prices of products exported to the EU and to non EU countries are characterised by an increasing trend for Southern Mediterranean exporting countries (Israel, Morocco, Egypt and Turkey) and a decreasing trend for other exporting countries. Price variability is largely differentiated and apparently seems linked to product characteristics and not to destination countries.

2.5.1.2 Prices of vegetables

Relationships between fob prices of vegetables appear less clearly defined than those characterising prices of fruit. The reason may be linked to the size of international markets of vegetables that are relatively smaller and often assume a local dimension, with trade flows are concentrated within neighbouring countries or a region.

Prices of tomatoes exported by the three main partner countries of the EU show very different patterns that are also due to the different qualitative characteristics of these products[12]. Prices of Israel exports, for which only few observations were available, in recent years have shown a decreasing trend from the high level of the late 1990s; this trend is shown for both exports to the EU and to other countries. On the other hand, prices of tomatoes exported by Morocco to the EU and to other countries show an increasing trend, while prices of Turkey exports have remained constant.

Details on the statistical analysis are presented in the Annex to the Preparatory Analysis – Para. "5. The price level on world markets".

There are not differences between prices of tomatoes exported by Morocco to the EU and to non EU countries, while tomatoes exported to the EU by Israel and Turkey have significantly larger prices than the products exported to non EU countries. Price of tomatoes exported by Turkey to the EU is also less variable than the other price.

Prices of cucumbers show a wide variety of trends and relationships according to the origin countries. Prices have been increasing for Central and East European Countries in the period before their accession to the EU, while they have remained constant in the case of Morocco and Turkey. Differences in average prices of exported cucumbers as well as in their price variability do not show regularities according to the destination countries.

The figure with fob prices of onions, presented in the Annex to the Preparatory Analysis – Para. "5. The price level on world markets", explains very effectively the lack of clear common trends as well as their wide variability. More information is carried by the table of correlations that show a negative relationship of fob prices of onions exported by Argentina and Australia in relation to the time, while prices of other exporting countries remain constant. Price variability is large for Australia and Argentina, which however show a significant trend. For all origin countries, except Chile, the average price of onions exported to the EU is higher than that of exports to non EU countries, on the other hand the variability of prices of products destined for the EU is lower.

Prices of beans exported by Egypt, Kenya and Morocco to the EU are characterised by an increasing trend. Variability as well as differences in average prices of exported beans do not show regular differences. Details on the statistical analysis are presented in the Annex to the Preparatory Analysis – Para. "5. The price level on world markets".

Estimated correlation coefficients between fob prices of peppers do not show relationships characterising these prices nor links with time. However prices of peppers exported by Morocco and Turkey to the EU are higher than prices of exports to non EU countries and show a lower variability.

2.5.2 World prices of F&V exported by the EU

Regarding the prices of F&V exported by the EU and the possible effects caused by the ER scheme, we have analysed prices of both the most exported EU products benefiting from the subsidy and of those not included in the scheme. The analysis is aimed at finding for each product imported by the main EU partner countries, relationships between the cif prices of the EU product and the average cif price of the product imported by other competing countries. The analysis is also aimed at finding out the way in which prices change over time.

[12] Israel exports to the EU mainly cherry tomatoes, while Morocco is more involved in the exports of round tomatoes.

In order to get insights on the effects of the ER scheme the analysis also aimed to find differences in the price level as well as in price variability. However, comparison of cif prices of products imported by the EU and by other countries must be carried out carefully, because the latter price may be influenced by imports made in seasons different from the one in which exports of the EU are made. The analysis has been carried out using calculated cif prices expressed in US dollars, because it is based on the comparison of prices of products destined by the EU and all other competing countries for non EU countries.

A first observation regarding the cif price of products according to the importing country relates to their level and the changes that characterised such prices during the period under review. The figures on prices for each product and origin countries show that the price levels of products exported by the EU and by other countries depends on the distance and the per capita income level of the destination country. In this situation a subsidy granted to exporters of the same amount regardless of the destination country would be more effective in boosting exports in neighbouring countries with a lower willingness to pay for the product.

2.5.2.1 World prices of F&V exported by the EU under the ER scheme

Prices of apples imported by Norway from the EU have been increasing, while prices of other competing countries have remained constant. The positive correlation between the price of apples imported from the EU and the price of competing exporting countries is positive, meaning variations of prices that have followed the same direction. Differences in prices according to the exporting country as well as their variability do not show regularities.

In the case of oranges, cif prices have been increasing for all destination countries with the exception of Switzerland. Also price variations have followed the same directions. Differences and variability of prices do not seem to be linked to the exporting country.

Details on the statistical analysis are presented in the Annex to the Preparatory Analysis – Para. "5. The price level on world markets".

Prices of mandarins and clementines have been constant, with the exception of products imported from the EU by the USA, their relative level has remained unchanged in the period under review. In the case of mandarins EU prices are regularly higher than the prices of competing countries and also less variable.

In the case of table grapes, prices are largely differentiated according to the destination country and are characterised by different trends. Prices of products exported by the EU to Russia, Norway and Switzerland have been increasing, while those of products destined to Romania have decreased. Price variability of EU exports of table grapes has always been larger than that carried by the prices of competing exporting countries. Moreover the analysis does not show regular differences in the average price levels of products exported by the EU and by major competing countries..

Exports of EU tomatoes to Norway, Russia and USA have been characterised by increasing cif prices. These prices and those of competing countries show positive correlations, meaning that their variations have gone, on average, in the same direction. The analysis does not show regular differences in the average price levels of products exported by the EU and by major competing countries according to the destination country, while their variability has been lower for tomatoes exported by the EU.

2.5.2.2 World prices of other F&V exported by the EU

Cif prices of F&V imported from the EU not covered by the ER scheme show in many cases increasing trends. Also the correlation between these prices and those of competing exporting countries are positive, indicating changes in the same direction.

In greater detail, the price of pears shows an increasing trend only in the case of exports destined for Croatia, while that of pears exported to other countries has remained constant on average. The correlation between fob prices of products imported from the EU and of pears imported from competing countries highlight positive and significant correlation coefficients, meaning that prices have moved in the same direction. Differences between average prices do not change according to the destination country, while cif prices of imports from the EU show a lower variability.

Details on the statistical analysis are presented in the Annex to the Preparatory Analysis – Para. “5. The price level on world markets”.

The price of melons exported by the EU to Croatia, Norway and Switzerland highlights an increasing and significant trend, while the price of melons exported to Russia has remained constant on average. The relationship with prices of melons exported by competing countries shows that they have changed in the same directions. The average price of melons exported by the EU is generally lower than the price of products exported by competitors. Also their variability is generally lower.

The evolution of prices of kiwis exported by the EU shows an increasing trend only for products destined for the Russian market, while at the opposite end the price of the product sold to Ukraine has been decreasing. The price of EU kiwis has evolved in the same way as prices of competing exporting countries. Differences in average cif prices for kiwis as well as in their variability do not show regular patterns according to the origin countries.

Prices of strawberries imported by the EU have been increasing in the case of products destined for Norway. Only in the case of strawberries imported by Iceland have the prices of EU products changed in the same direction as prices of competing countries. The average level of cif prices for EU strawberries is always higher than the price of products from other countries with the exception of products sold in Switzerland, while the variability of cif prices of strawberries imported by the EU is not different from the variability of prices of products imported from other countries.

As far as cif prices of vegetables are concerned, it is possible to note that among the products imported from the EU none shows positive price trends. Decreasing price trends were seen for asparagus imported from Norway and Russia, and by onions imported from African countries. The average prices of vegetables imported from the EU, as well as their variability, do not show differences with prices of products imported from other countries.

3. CONCLUSIONS ON THE PREPARATORY ANALYSIS

The preparatory analysis sought to examine with a descriptive approach the various features relating to both: the evolution of EU trade of F&V within the wider context of the world market; the management of the entry price (EP) and export refunds (ER) schemes. Within the Evaluation exercise, the aim was to feed the different parts of the analysis, carried out to answer evaluation questions on the impact of the two instruments. The analysis has been based on the assessment of following points:

1. the development of EU trade of F&V and its position among the major competitors within the development of world trade;
2. the identification of factors influencing EU trade of F&V: internal demand and supply, prices of domestic products compared with prices of competing countries;
3. the operative functioning of the EP and ER schemes and their relationships with EU trade of F&V.

The results obtained by the preparatory analysis have shown that the EU, especially in recent years, has increased the flows of both imports and exports of F&V regardless of the border measure adopted by the EU. However, import and export trends differ. Compared to other major importers, the number of fast growing imported products significantly increased in the EU in the most recent period. By contrast, no product with ER has been fast growing in the EU vis-à-vis other export partners. Export performance of products without ER in the EU has been better, but in many case worse than that observed for most major exporters.

At the present time, imports and exports have taken a larger share of the internal supply of F&V, and trade flows have an increased relevance within the EU F&V industry. These trends can be interpreted as an index of the increased openness that both the EU and the external markets have reached in recent years, following a general pattern of the world economy. Therefore, the results of the preparatory analysis have highlighted that the existence of the EP system has been compatible with the general objectives of EU policies in favour of the development of trade relations. This includes better market access and reduced distortions in world trade, which contribute to improving trade relations, in particular with developing countries. Also the ER system seems compatible with these objectives, although it must be considered that following the implementation of the URAA the quantity of exports benefiting from the subsidy diminished considerably, while the unit subsidy was reduced further.

The analysis of factors affecting EU imports of F&V

The world F&V markets are changing radically towards an increasing concentration in different segments of the supply chain. The increasing concentration in the retailing industry and in trading as well as the innovations introduced in logistic functions are resulting in a shortening of the supply chain, requiring an increasing concentration also on the producer side. In this scenario the traditional spot markets are losing their importance in price determination while competition among producers is based not only on price but also on non price factors such as product quality and safety standards, the timing of supply and the ability to offer large quantities of products.

In the period from the introduction of the EP system in 1995 to 2006, imports of F&V from third countries have increased both for products covered by the EP system and for products not included in the scheme. The analyses carried out have shown that this increase in many circumstances happened without a significant decrease in the price ratio between imported products and domestic products. However, falls of this ratio have been particularly evident in the case of apples imported from China allowing producers of that country to gain a relevant position within EU markets, starting from very low levels of imports.

In many circumstances this has happened because increased imports relate to products imported in seasons other than those in which EU supply is on the market, and are not directly competing with it. This is the case for off-season imports of fruits from southern hemisphere countries and also for horticultural products imported particularly from Southern and Eastern Mediterranean Countries. Of course, this pattern benefits EU consumers who have a larger availability of a wider set of F&V products all year round.

An important point of the Preparatory analysis has been the study of the functioning of the EP systems. Through the comparison of daily SIVs published by the EU Commission with the trigger EP the analysis has sought to identify the conditions under which the maximum tariff equivalent is applied. The comparison has shown very different situations. In general for a large number of products and origin countries during the period under review the relative difference between the SIVs and trigger EP has been constant or increasing Because the analysis of the fob export prices of EU partner countries showed that such prices have been increasing and have the same pattern of products exported to other destinations, with the relevant exception of imports from China (apples and pears) and Argentina, this may be interpreted as a signal that the EP system is not put under pressure by an increasing price competition arising from imported products.

However there are some products as tomatoes, lemons and also plums whose analysis has highlighted a very different picture, particularly in the case of some origin countries. For these products very often the SIVs are lower than the trigger EP. A frequently discussed and analysed issue, in economic literature, is the response of the EP system to imports of tomatoes from Morocco. The SIVs of tomatoes from this origin country are often lower than the trigger preferential EP. Such a situation has a long history, since the first agreement on preferential EP granted to tomatoes signed between the EU and Morocco before the start-up of new border measures in 1994, whose contents have been modified several times, increasing the quantities of product benefiting from the zero tariff as well as the recent extension of the period in which the preferential EP applies. This case resembles a model of "managed trade" in which the competitive pressure arising from Morocco producers is handled by modifying the contents of the preferential agreement signed with the EU. Given the relevance of the issue, more insights into the effects of these imports on the stability of the EU internal market will be gathered through the development of Theme 1 of the Evaluation exercise.

The analysis of prices has also attempted to assess the effects caused by the EP system in terms of the selection of export flows according to the quality of products destined for the EU and for other countries, which is believed to be one of the effects of the EP system. The analysis has aimed to find differences in prices between products exported by partner countries to the EU and to non EU countries that could be associated with different qualities of traded products. This analysis was carried out both for products covered by the EP system and for products not included in the scheme, but its results did not show a clear pattern in prices that could be interpreted as a quality selection effect caused by the EP.

The analysis of factors affecting EU exports of F&V

General trends for EU exports of F&V show that during the period from the start-up of the new system to grant ER introduced after the Uruguay Round Agreement on Agriculture in 1995 up to 2006 they have increased considerably. Also the share of exports out of total EU production has increased. The analysis has shown that the growth of exports was larger for products not benefiting from ER. It is also a fact that both the unit ER granted to exports and also the quantity of products benefiting from it have decreased considerably, at least until the last enlargement of the EU. However the results of the analysis highlighted that it is not possible to make a clear association between changes in exports and changes both in the average ER per exported unit and the share of total exports covered by ER.

The analysis of prices of exported products has shown that their level differ considerably, and depend on both the distance of the destination country and on the average income level of that country. Prices of many products exported by the EU have been increasing, and this pattern shows no differences between products benefiting from ER and products that do not benefit.