



Sustainable Agriculture in Central Asia and the Caucasus

6

Alternative Crops for the Subtropical Zone of West Georgia and Their Sales Opportunities and Risks on the European Market

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August, 2009

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To be cited as:

Bedoshvili, D., C. Martius, A. Gulbani and T. Sanikidze (2009). Alternative Crops for Subtropical Zone of West Georgia and their Sales Opportunities as well as Risks on the European Market. Sustainable Agriculture in Central Asia and the Caucasus No. 6. ICARDA-CAC/FAO 2009. 45 pp.

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ISSN: 0254-8318

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Abstract

The present study examines the possibilities of introducing alternative food and nonfood crops in the subtropical areas of West Georgia with special regard to its humid climate, prevailing temperatures (hot summers, mild winters) and soil type (podzolic and red subtropical soils with low values of pH). The study aims at a) selecting alternatives to present major income generating crops such as tea, citruses, which currently dominate the West Georgian agricultural sector, but have lost their economic importance since the Russian market became inaccessible for Georgian producers and b) considering opportunities and risks associated with marketing of the selected crops on the European market.

A total of 37 theoretically suitable plants have been identified through extensive literature research. They include 36 food plants: 10 plants that produce berries, nine plants that produce fruit, nine plants that produce vegetables, five oil-delivering plants, two spices and one starch-delivering (pseudo-cereal) plant. In addition to the food plants, one alcohol-delivering plant was identified. Based on the existing data and experience, the most promising alternatives are berries, subtropical fruits (kiwifruit, feijoa, persimmon, etc.), cabbages and topinambur. Cut flower cultivation is another alternative.

European Union is the biggest market for fruits and vegetables, organic foods and cut flowers in the world. European Union imports big volumes of subtropical fruits and significant amounts of temperate fruits from the developing countries off-season. The developing world is the biggest supplier of many vegetables and mushrooms for EU. The organic sales have grown more rapidly than those of the conventional products and shortages of supplies have been observed in some organic sectors in EU. Supermarkets play dominating role in retail sales and increasingly require big volumes of supplies. Most of cut flower supplies are channeled through auctions in the Netherlands. European Markets are very competitive and Georgian producers will have to cope with strong rivals.

The EU agricultural market is regulated by the common agricultural policy, which stabilizes markets, protects European farmers from low world prices and provides for safety of food. EU maintains a common customs barrier in respect to the third countries. There are four groups of the EU regulations that are to be observed by successful exporters to the European countries: hygiene regulations, food labeling, marketing standards and plant health requirements. There are additional regulations that apply for cut flower and organic products import to EU.

Georgia has advantageous geographical position and convenient sea ports on the East coast of Black Sea to access EU. The best opportunities for Georgian exporters lie in creating or adapting products that serve market segments and capitalize on trends in consumption, production and trade. Successful products need to be of high quality, and comply with demands for certification and food safety, and the demand for supplying large volumes due to consolidation in buyers markets.

In the nearest future, the Georgian exporters should target niche markets, as competition in the commodity markets requires economies of scale and very high cost-efficiency of production. Among the promising products could be fruits, berries and vegetables or products where Georgian producers have a long-standing history and advantage, such as wine varieties. Good opportunities exist with subtropical and off-season fresh fruits and vegetables, added value products (ready products), organic products, participating in offshore outsourcing and supplying the new EU member states where consumption levels are increasing. Cut flowers are probably the best option for Georgian exporters to access the mass-markets in Europe.

The development of the export-oriented agriculture should be supported through agricultural research and policies aimed at strengthening competitiveness of the Georgian agriculture.

Introduction

Since its independence in 1991, Georgia pursued a rapid transition from planned to market economy. A land privatization reform has been going in Georgia since 1992 and the agricultural land, which used to belong to big collective and soviet farms, is being transferred back to farmers. In the 1990-ies and early 2000-ies, Georgian farmers experienced difficulties due to land fragmentation, increased prices of inputs, and decreased prices of commodities, deficit of machinery and lack of stable markets.

The Georgian agriculture suffered remarkably from the breakage of traditional market linkages as most of its agricultural products were marketed in the former Soviet Union republics. Georgia was almost an exclusive supplier of many agricultural commodities including tea and citruses in the Soviet Union. In 1980-ies Georgia used to produce almost 95% of tea and more than 1/3 of citruses consumed in the Soviet Union. These markets are mostly lost due to political reasons and increased competition from international companies that have gained free access to the markets of the most of the former Soviet Union countries since 1991. Farmers of West Georgian suffered even more than other parts of Georgia. Production of tea and citruses declined drastically (at least as much as tenfold). This decline was more remarkable than that of production of temperate seed fruits and grape in East Georgia. Almost 90% of the tea plantations are still abandoned; most of the citrus plantations are managed at a very low input level and only best fruits are harvested.

During recent years, the Georgian government has been making efforts to raise competitiveness and export potential of the Georgian agriculture through re-building the irrigation system, providing farmers with machinery through credit, facilitating establishment of large farms (“The program of 100 farms”), introducing new technologies and improving access to international markets, the especially European Union.

Examination of possibilities of introducing of alternative food and non-food crops in the country is the purpose of the present study. This study is intended to demonstrate an approach for initiate a diversification in crop production of Georgia, which can reduce dependence of the Georgia farmers on the world market fluctuations of single crops. The authors believe that discrete selection of crops will promote more efficient use of natural resources and higher crop yields. This study furthermore addresses the sales opportunities and risks of certain crops on the European Market, as one alternative for generation of foreign earnings other than the present tea and citrus production and marketing that dominates in West Georgia.

Therefore this study has two objectives of: (1) analyze and choose alternative crops which can adapt to subtropical conditions in West Georgia and (2) explore the potential for export of these agricultural products into the European Union. To reach the objectives, the study starts with selection of suitable crops that would grow under the specific conditions of West Georgia (characterized by high humidity, mild winter and acid and in part water-logged soils). Then, their markets in Europe are examined. Furthermore, the European food laws and food quality and customs legislation are analyzed.

The study is structured as follows: The next, Chapter 1 describes the environment of West Georgia. Chapter 2 discusses the approach used to select the list of alternative crops, presents the list of crops, and assesses their suitability for the EU Market. Chapter 3 assesses the market situation of the crops in question in EU. Chapter 4 provides introductory information about trade relationship between Georgia and EU and illustrates selected aspects of the European food law and quality, and customs legislation. Finally, in the last chapter, some conclusions regarding the most promising crops are drawn and the basic conditions for their successful marketing in the EU are outlined. At the end, prospects for further studies and efforts are given.

This study can only give an introductory overview of the possibilities and difficulties in finding suitable alternative crops and exporting into the EU from a third country as it was developed within a short-term consultancy and was undertaken to provide the basis for a more profound study.

1. Environment

The subtropical zone in West Georgia covers lowlands and foothills within the elevations 0-500 m above the sea level. It includes the Colchis lowland, other lowland areas in Abkhazia and Achara as well as surrounding foothills. It is the wettest part of Georgia. Annual precipitation at the Black Sea coast exceeds 1,200 mm. In foothills of Adjara as much as 2,500 mm have been recorded in some years. During the warm season, Abkhazia, the Colchis lowland and Achara receive 700-1000, 700-1400 and 1000-1680 mm, respectively. Annual average temperature is equal to 15⁰ C at the Black Sea coast and it declines in the lowland of the river Rioni for as much as 0.3-0.8⁰ C with raise of elevation for every 100 meters and reaches 13⁰ C in the foothill zone. The average monthly temperature reaches 24⁰ C in summer and declines to 5-10⁰ C in winter. The absolute winter minimum is -15-20⁰ C. The period without frost lasts from 239 to 309 days. Typically, no snow cover is observed. The accumulated temperature varies from 4,000 to 4,800 degrees per year. The active growth season lasts from end of March till beginning of November. In some years, parts of the subtropical zone are exposed to hot winds in spring and early summer, which promotes drying of air and soil. Periodically, intrusion of cold air masses is observed, which results in low temperatures and damage of subtropical crops (Agro-Climatic Resources of Georgia, 1978).

The soil cover of the region is very diverse. In the areas with flat and depressed relief, high rainfall and heavy texture of sediments promote conditions for permanent excessive humidity of soil, which is the main factor of soil formation and promotes bog and peat soils. These soils are not used for agriculture without applying profound melioration and drainage to remove excessive moisture and improve their chemical and physical properties. In relatively elevated areas of the lowlands, the impact of descending water flows on soil formation prevails and results in formation of podzol and predominance of podzolic soils. Podzolic soils are acid and mostly used for production of tea and, to lesser extent for production of citruses and tobacco. Sometimes maize is also produced on podzolic soils in the eastern part of Colchis lowland. Due to leachability, podzolic soils are less fertile, more acid and very responsive to melioration, especially to liming. Alluvial soils are widespread along valleys of the numerous rivers of the region. They have better physical and aerial properties; they respond well to soil fertility management, and are widely used for production of maize, vegetables and to lesser extent for tea, citruses, tobacco, essential oil crops etc. Red subtropical soils prevail in the foothill zone. Deep chemical decomposition of rocks under humid subtropical conditions promotes leaching of bases from soil and enriching with iron and aluminum oxide resulting in red color and high acidity. Tea and citrus are produced on red soils. Yellow subtropical soils are transitional between red and brown forest soils. The yellow soils contain less iron hydroxide and have lighter texture than red soils. Not only tea and citruses, but also for fruits, vegetables and tobacco are grown on yellow soils. Red and yellow soils contain rather high amounts of humus and are considered as fertile. However, their fertility can decline very much on washed and eroded slopes. They respond well to application of fertilizers. Development of podzolic layer is observed in large areas covered by red and yellow soils. Brown forest soils are found at the upper limits of the subtropical zone. They are spread higher than 400-500 meters above the sea level and are relatively fertile and used for production of maize (Sabashvili, 1965).

Georgia is a country of rich and one of the oldest agricultures on the earth. In the ancient times, Colchis people cultivated diverse grain, legume, oil and fiber crops. Archeological data and ancient sources of information suggest that sorghum (*S. bicolor*) and millets (*Panicum italicum*, *P. miliaceum*, *P. frumentaceum* and *P. germanicum*) had been very widespread in West Georgia since ancient times and had been used for production of bread and porridges until the late stages of the medieval epoch. There are historical evidences that rice was also grown in West Georgia. Four out of 14 wheat species are endemic to West Georgia: *Triticum paleo-colchicum*, *T. timopheevi*, *T. macha* and *T. zhukovskii* and represent remnants of the ancient cultural flora of

Colchis. During ancient times, not of lesser importance were barley and rye. Archeological findings provide evidence that broad beans (*Vicia faba*) lentil (*Lens culinaris*), French lentil (*Vicia ervilia*), pea (*Pisum sativum*), vigna (*Vigna. sinensis*) and peavine (*Lathyrus*) were widely grown and used in West Georgia. Fiber and oil crops were presented by flax (*Linum bienne* and *L. humile*), cotton and hemp. Fruits crops (apples and pears), as well as grapevine were also cultivated and widespread. Georgians harvested hazelnuts, walnuts, laurel and chestnut trees (Ketskhoveri, 1957).

The replacement of grain crops by maize, as well as intrusion of other “American” crops began in the second half of 17th century. Most of the local food legumes were replaced by common beans. Cultivation of tea, citrus and other subtropical crops was initiated in the 19th century in Georgia. They spread over most of the agricultural lands in West Georgia in the 20th century and Georgia became almost an exclusive supplier of tea and citrus in the Soviet Union.

There has always been an intensive research on introduction of new crops in West Georgia during the Soviet Era, which was explained by suitability of the West Georgian environment for growing subtropical crops, which was unique for the Soviet Union and willingness of the Soviet Government reduce its dependence on the food imports. Several institutions, including RI of Tea, Subtropical Crops and Tea Industry, Batumi Botanical Garden and RI of Plant Immunity conducted intensive research and trials on new crops in the past and continue to do so at present.

2. Alternative crops for the subtropical areas of West Georgia

2.1 Methodology

The following methodology, designed by Kohlschmitt, et al., 2007, was used to identify crops that can be cultivated in addition to the crops already cultivated in subtropics of West Georgia. First a list of crops usable for food and industrial purposes was made with the help of guide books such as *The Cultivated Plants of Tropics and Subtropics* (Rehm and Espig, 1991) and *Nutzpflanzenkunde* (Liebeirei and Reisdorf, 2007). The result was a list of 240 crops (Annex 3). In the next step, the list was analyzed under special consideration of the prevailing environmental determinants as well as information and expert knowledge provided by the Research Institute (RI) of Tea, Subtropical Crops and Tea Industry, the Batumi Botanical Garden and the RI of Plant Immunity. The determinants are rainfall (> 1,200 mm), temperature (up to 35-40⁰ C in summer and down to minus 15-20⁰ C in winter) and soil (podzolic, loamy, with acid reaction pH 4.5-6). For this, two electronic databases for crops (ISWS 2005 and NewCROP 2005) were used. Those crops that are already widely produced in the area have been deleted (Please refer to Annex 4). Some plants were included in the list although there have been already some attempts to produce them in the region, but they are not well-known and occupy small areas. Furthermore, several additional crops not provided in the first listing were selected based on some expert knowledge (regarding potential for the region or declared interest by locals to grow these crops) and examined in the same way.

2.2 List of the alternative crops

A total of 37 plants theoretically suitable for growing in the subtropical zone of West Georgia were identified (Table 1). The list contains 36 food plants: 10 berry plants, nine fruit producing plants, nine vegetable plants, five oil-delivering plants, two spices and one starch-delivering plant. In addition to the food plants, one alcohol-delivering plant was identified.

Besides berries and some other crops, which fit very well acid soils, the table also contains crops for which higher values of pH are indicated, but which are known to fit the West Georgian conditions well. Plant production in West Georgia is not limited to crops that can tolerate acid soils. There are practices that can improve soil properties. E.g. liming of soil is a standard practice in West Georgia. It improves soil properties (neutralizes soil acid reaction), raises crop yields and increases diversity of crops that can be grown in West Georgia.

Table 1: Crops that can be grown in the subtropical areas of West Georgia

#	Use	Crop	Scientific Name	Temperature in °C	Winter Minimum	Frost	Soil pH & type
1	Berries	Blueberry	Vaccinium, sect. cyanococcus		-42°C	Tolerant	4 to 7.8 medium
2	Berries	Blackberry	Rubus argutus		-25°C		4.5 to 7
3	Berries	Blackberry	Rubus frondosus		-23°C		4.5 to 7
4	Berries	High bush blueberry	Vaccinium corymbosum	Abs Max: 42 Abs Min: 7	-36°C		4 to 5.5; acid sandy loams
5	Berries	Low bush blueberry	Vaccinium angustifolium	Abs Max: 30 Abs Min: 4	-36°C	Resistant	4.3 to 5.5
6	Berries	Rabbiteye blueberry	Vaccinium ashei	Abs Max: 30 Abs Min: 10	-23°C	Low	4.3 to 5.5
7	Berries	Swamp high bush blueberry	Vaccinium formosum		-26°C		4.5 to 5.2 acid sandy loams
8	Berries	Red raspberry	Rubus strigosus	Abs Max: 28 Abs Min: 6	-34°C	Tolerant	5.5 to 7
9	Berries	Gooseberry	Ribes uva-crispa	Abs Max: 32 Abs Min: 10	-2°C		6 to 7

10	Berries	Black currant	Ribes nigrum	Abs Max: 30 Abs Min: 5	-28°C		6 to 7; deep loam
11	Fruit	Sour cherry	Prunus cerasus	Abs Max: 30 Abs Min: 15	-29°C		6 to 7
12	Fruit	Nectarine	Prunus persica		-20°C	Resistant	Moisture retaining loam soils
13	Fruit, oil	Olive	Olea europaea subsp. europaea	Abs Max: 28 Abs Min: 15	-2°C	Some varieties	Loam to infertile soils, pH 5-7
14	Fruits	Chancellor grape	Vitis vinifera	Abs Max: 38 Abs Min: 10	-26°C	Tolerant	5 to 7
15	Fruits	Concord grape	Vitis labrusca	Abs Max: 35 Abs Min: 6	-30°C	Resistant	4 to 7
16	Fruits	Kiwifruit	Actinidia chinensis	Abs Max: 35 Abs Min: 10	-17°C	Low	Light with humus, pH 5-7.0
17	Fruits	Persimmon	Diospyros kaki	Abs Max: 35 Abs Min: 8	-20°C	Tolerant	Clays and heavy loams pH 5.5 to 6.5
18	Fruits	Feijoa	Feijoa sellowiana			Tolerant	Acid soils
19	Fruits	Mulberry	Morus rubra	Abs Max: 32 Abs Min: 12	-36°C		pH 5.5-7.5
20	Oil	Soybean	Glycine max	Abs Max: 41 Abs Min: 5	-6°C		Medium to light textures, pH 6.5-7.6
21	Oil	Tung -tree	Aleurites montana	Abs Max: 34 Abs Min: 8			Many types, pH 5.5-6.5
22	Oil	Spring rape	Brassica napus var. napus	Abs Max: 41 Abs Min: 5	-6°C		Medium to light textures, pH 6.5-7.6
23	Oil	Flax	Linum usitatissimum	Abs Max: 30 Abs Min: 5	-6°C		Silt clay loams, pH 6-6.5
24	Oil	Safflower	Carthamus tinctorius	Abs Max: 45 Abs Min: 5	-14°C		Deep clay loams, pH 5.4-8.2
25	Inulin	Topinambur	Helianthus Tuberosus	Abs Max: 30 Abs Min: 7	-42°C		Many types, pH 4-7
26	Spice	Saffron	Crocus sativus	Abs Max: 23 Abs Min: 4			Clay loams, pH 6-7
27	Spice	Bay laurel	Laurus nobilis	Abs Max: 30 Abs Min: 8	-5°C		pH 5.0-6.5
28	Vegetable	Okra	Abelmoschus esculentus	Abs Max: 35 Abs Min: 12		Low	Sandy loams, pH 5-7.5
29	Vegetable	Onion	Allium cepa var. aggregatum	Abs Max: 30 Abs Min: 10			Light textured organic soils, pH 5-7
30	Vegetable	Chinese onion	Allium chinense	Abs Max: 35 Abs Min: 8			Light texture, 5.5-6.5
31	Vegetable	Celery	Apium graveolens var. dulce	Abs Max: 26 Abs Min: 6	-5°C		Irrigated deep sand or loam, 5.8-7
32	Vegetable	Asparagus	Asparagus officinalis	Abs Max: 38 Abs Min: 6	-40°C		Deep sand or loam, pH 6.5-8
33	Vegetable	Kohlrabi	Brassica oleracea var. gongyloides	Abs Max: 25 Abs Min: 5	-2°C	High	Deep medium textured soils, pH 6-7
34	Vegetable	Broccoli	Brassica oleracea var. italica	Abs Max: 25 Abs Min: 3	-30°C	High	Heavy to sandy loams, pH 6-7.5
35	Vegetable	Cayenne pepper	Capsicum annuum var. annuum	Abs Max: 35 Abs Min: 8		Low	Loams, good lime
36	Vegetable	Dill	Anethum graveolens	Abs Max: 26 Abs Min: 6	-2°C		pH 6 to 7
37	Pseudo cereal	Buckwheat	Fagopyrum esculentus	Abs Max: 40 Abs Min: 7			Silt loam, sand, pH 5.5-6.5

The plants included in the list should be considered and further tested for production. Not all of the listed crops may be grown advantageously under the conditions of West Georgia, as not all production constraints have been taken into account due to limited scope of the study. However, there is preliminary data that some of the crops will represent promising alternatives (e.g. berries, kiwifruits, onions, cabbages, spices, topinambur, etc).

Capability of land to grow these crops is not the only factor needed to decide on their suitability. Also eventual special knowledge and technologies needed for their production, storage, processing and transport, and the size and location of the potential markets to sell these products must be further investigated before production in large areas is taken up. In view of the convenient geographical location and of West Georgia and availability of sea ports, exportation of Georgian fresh fruits and vegetables to the neighboring countries, former Soviet-Union countries or the EU seems possible. However, further processing of selected fruits and vegetables in Georgia can be also considered as a promising opportunity, as it would augment locally added value and increase employment. Freezing, drying, and canning as well as fruit juice production are some possibilities.

The geographical location of Georgia and its environment is convenient for export-oriented cut flower production. Cut flowers can be potentially planted in greater share of the land in West Georgia if cheap and rapid air transport to the markets guaranteed. Table 2 lists some of the most demanded flowers in the international markets.

Table 2: Cut flowers

#	Use	Crop	Scientific Name
1	Cut Flower	Aconitum	Aconitum spp.
2	Cut Flower	Arum Lily	Zantedeschia aethiopica
3	Cut Flower	Aster	Callistephus Chinensis
4	Cut Flower	Billy Balls	Craspedia
5	Cut Flower	Calla lily	Zantedeschia
6	Cut Flower	Carnation	Dianthus
7	Cut Flower	Delphinium	Delphinine
8	Cut Flower	Chrysanthemums	Dendranthema
9	Cut Flower	Easter Lily	Lilium longiflorum
10	Cut Flower	Fox-tail Lily	Eremerus
11	Cut Flower	Geranium	Geranium bohemicum
12	Cut Flower	Gerbera	Gerbera
13	Cut Flower	Gladiolus	Gladiolus
14	Cut Flower	Kazanlik Rose	Rosa damascena
15	Cut Flower	Lily	Lilium
16	Cut Flower	Marigold	Tagetes
17	Cut Flower	Orchids	Orchidaceae
18	Cut Flower	Peony	Paeonia
19	Cut Flower	Red Hot Poker	Kniphofia
20	Cut Flower	Rose	Rosa
21	Cut Flower	Tulips	Tulipa
22	Cut Flower	Viola	Viola x williamsii
23	Cut Flower	Zinnia	Zinnia haageana, maritima, elegans

The remainder of this paper therefore looks specifically at how the specific situation of West Georgia (subtropical climate, good shipping connections to Europe etc.) could be explored in view of the EU market, and which regulations and standards have to be met to export vegetables, fruits and cut flowers to this large and growing market.

3 The EU market situation

3.1 Fruit and vegetables

Consumption

The consumption of fresh fruits and vegetables in the EU has been growing steadily during the recent years amounting to 77 million and 62 million tons, respectively, in 2006. Fruit and vegetables are increasingly available throughout the year, through increased storage and production technology and imports. There are large differences in consumption rates and patterns among the EU member countries. Italy and Spain have the highest consumption rates and jointly account for nearly 40% of the total EU market in 2006. They are also the largest producers of fruit and vegetables. France, Germany and the United Kingdom also have large consumption levels, together with limited production - hence higher imports. The new EU members have lower consumption figures. Overall consumption is expected to grow due to growth in the markets of the new EU member states.

The most important trends influencing EU food markets and consumer choices are health, convenience, and pleasure. Fruits and vegetables fit well into these trends, especially the health aspect. Consumption of tropical fruits is rapidly growing (except for bananas, which are well-established). Growing familiarity with these products and their increased availability are boosting demand. Retailers and manufacturers are seizing new opportunities by offering, washed, pre-cut, pre-packed and portioned fruits and vegetables. A growing number of consumers demand organic and fair-trade products and product diversity.

Production in the EU

The EU is a big producer of fresh fruit and vegetables. In 2006, the fresh fruit production in EU reached 69 million tones, while the vegetable production exceeded 61 million tons. Most fruit and vegetable production is distributed in the southern countries such as Spain and Italy. From 2002 to 2006, fruit production increased, although by less than 1%, while vegetable production decreased by nearly 1%. The main fruits produced are apples, oranges and grapes. Fruit production in northern Europe is limited as they can only be produced seasonally due to its temperate climate. However, greenhouses enable the year-round production of vegetables, while storage facilities for certain fruit species such as apples enable year-round supply. Important trends in production include offshore outsourcing and value adding in the country of origin.

Trade channels

There is a strong tendency of concentration in the supply of fresh fruit and vegetables in the EU, although the extent of this varies between countries. Concentration is especially visible at the retail level, where an ever-smaller number of highly professional players dominate distribution. This, in turn, has provoked changes in the supply chains with larger companies having a stronger customer orientation. Suppliers of multiple retailers must be able to supply consistent volumes of guaranteed quality on a year-round basis, and be very efficient, flexible and alert to new developments.

Imports

The EU's production of tropical fruits is limited to very small-scale production of bananas and pineapples in Spain and Portugal. Most of these fruits are imported, together with fruits that are unavailable off-season. In 2006, EU imports of fresh fruit accounted for €19 billion value, an increase of 20% since 2002. Import volumes increased by 16% over the same period, reaching 25 million tons.

Germany, the UK and the Netherlands are the main importers of fruit, together accounting for nearly half of the EU's imports (by value) in 2006. The main suppliers of fruit to the EU are

Spain, the Netherlands, Italy, Belgium and France. The biggest trade is in bananas, apples, grapes, and citrus fruits.

Imports from developing countries (hereafter DCs) were substantial with a value of at €7.1 billion and a volume 9.8 million tonnes in 2006. Their market share is growing faster than the total market. DCs have a strong position in bananas, pineapples, mangos, papayas, lychees, guavas, dates, passion fruit and avocados. In the off-season they supply citrus fruits and apples. In 2006, DCs had a 37% share in total EU import value. The leading DCs exporters of fresh fruit to the EU are South Africa, Costa Rica, Chile and Ecuador. South Africa is a major supplier, especially of off-season products: grapes, apples and citrus fruit. Latin-American countries prevail in the external EU import of tropical fruits (e.g. bananas and pineapples).

In 2006, EU imports of fresh vegetables amounted to 11.5 million tons with a value of €10.7 billion. Imports from DCs were €1.2 billion and 1.2 million tons, a much smaller share than for fruit imports. However, both value and volume have grown rapidly since 2002, by 35% and 36% respectively. The largest EU importers of fresh vegetables are Germany, Great Britain, France and the Netherlands. Spain and the Netherlands were the leading suppliers within the EU, together accounting for 55% of the total import value in 2006. The imported main vegetables are tomatoes, sweet peppers, lettuce, cucumbers and mushrooms.

African countries are important suppliers of vegetables such as peas and beans, artichokes, courgettes, aubergines and sweet maize, particularly to France, the UK, the Netherlands and Italy. EU vegetable imports are more characterized by intra-EU trade than fruit imports. The leading DCs supplying vegetables are Morocco, Kenya, Turkey, Egypt and Peru (the leading supplier of asparagus).

Exports

In 2006, EU fruit exports amounted to 17 million tons with a value of €13.2 billion. This represented a growth of 18% in value and 14% in volume since 2002. Most exports (88% of total EU export value) go to other EU countries. The main fruit exporters are Spain, Belgium, Italy and the Netherlands. The major exported fruits are bananas, apples, tangerines, grapes and oranges. Belgium and the Netherlands are the largest re-exporters of fruit from DCs, each of them specializing in specific product groups (Belgium, for instance, in bananas).

In 2006, EU exports of vegetables amounted to 10.9 million tons with a value of €9.6 billion. Among the biggest exporters in EU are Spain and the Netherlands, which account together for more than 60% of value. Spain mainly exports domestic produce, while the Netherlands exports both domestic produce and imported vegetables. 90% of EU exports of vegetables are exported to other EU countries, these being mainly tomatoes, sweet pepper, lettuce and cucumbers. Growth in international trade and the upcoming markets in Eastern Europe have resulted in a dramatic increase of re-exports and transit trade of fruit and vegetables. The largest share of this falls on Netherlands and Belgium. However, re-exports from Germany, France and Spain are gaining in importance.

3.2 Organic market

Demand for organic products is growing in the whole world. The global volume of organic food and drink revenues has increased from 23 billion USD in 2002 to 33 billion USD (i.e. 25.5 billion Euros) in 2005, suggesting annual growth at the level of 14%. Although the growth was observed in all regions, the European and North American markets were the two major markets bearing responsibility for growth.

Demand for organic crops has exceeded supplies in many sectors. The North American market has been experiencing supply shortages for a number of years; however, Europe and Asia are now also affected. Undersupply in the organic dairy sector is causing a leading British supermarket to market transitional organic milk, and an American organic yoghurt producer to import from New Zealand. Other sectors experiencing supply shortages include organic fruit & vegetables, meat products, beverage and ingredients.

The organic market of Europe is the biggest in the world and it comprises more than half of the global revenues (17 billion USD or 13.1 billion Euros in 2006). However, most of the revenues are collected in the West European countries. The organic markets of Germany, the UK, France and Italy provide for more than $\frac{3}{4}$ of the European revenues. High demand for organic foods is also observed in the Netherlands, Sweden and Denmark. However, the latter countries are much smaller markets as their populations are small.

The fastest growing organic markets of Europe are Germany and the United Kingdom, for which very high growth rates have been recorded for the last 3-4 years. During the last years, appearance of discounters is observed, especially from Eastern Europe, which has had some impact on the German market, where supplies for organic products have declined, whilst retail competition has increased. More and more organic foods are sold through drugstores and supermarkets. In the UK, the local organic production is lagging behind demand, providing favorable environment for growth of import. Demand for organic foods has especially increased in the dairy sector, which, after experiencing oversupply since 2001, is now increasingly relies on imported products. Australasia, Latin America and Europe are major importers of organic meat products into the UK.

Analysis of the data on organic consumption per capita shows that Alpine and Scandinavian countries lead Europe. The highest values are recorded in Switzerland, where consumers spent almost 140 US-Dollars (108 Euros) per capita on organic foods in 2005. They are followed by the citizens of Denmark, Sweden and Austria, which are the next largest spenders. The lowest spenders on organic foods are Southern, Central and Eastern European consumers. The new EU accession countries are especially small in terms of the organic market. E.g. the countries of the Central and Eastern Europe constitute not more than two percent of the European revenues. Organic primary crop production is increasing in Central and Eastern Europe; however, most of it is exported to Western Europe. In contrast, Central and Eastern European countries lack organic food processing and, therefore, most finished goods are imported from the West.

3.3 Cut flowers

Consumption and trends

The EU is one of the biggest consumers of flowers, accounting to almost 50% of the world consumption. Among the EU countries, Germany UK, France and Italy are major consumers in terms of absolute values. The Netherlands is the biggest consumer of lowers per capita, followed by the UK, Denmark and Austria in descending order.

The average per capita consumption in the EU remained stable between 2002 and 2006. In general, the Northwest European markets are mature markets, characterized by a high level of saturation. The highest market growth is observed in the UK and Spain, whereas many East European markets are still underdeveloped, characterized by low consumption levels and their absolute size remains small compared to the leading markets. Decrease in cut flower consumption is noted in Italy, and to a lesser extent in Germany, France and The Netherlands. The reason is weaker performance of the economies and a lowering purchasing power of consumers.

Major trends in EU consumption:

- Consumers are increasingly asking for high-quality flowers. Supermarkets are also becoming stricter in their quality requirements.
- Growing demand for bouquets and, subsequently, for summer flowers and foliage, both for higher-quality main products and for smaller varieties.
- Consumer concern for the environment. Certificates and other ways to guarantee the protection of the environment offer possibilities to respond to this consumer demand.
- Increased demand for exclusive or novelty products and trendy products, which change very frequently and only remain popular for a short period.
- With respect to individual cut flower species, it is important to note that Rosa remains by far the most popular flower all over the EU. Within the Rosa market, a shift of consumer preferences from smaller towards bigger budded varieties is observed. This shift is related to the increased demand for higher-quality and more expensive flowers.
- Dianthus sales have decreased considerably in the last decade, particularly in the Northwest EU countries. However, recent interest by fashion designers and fashion stores could be interpreted as a sign of revival of Dianthus.

Production

The biggest producer of cut flowers in the EU is the Netherlands, which is followed by Italy. In some Northwest European countries like the UK, Germany and Belgium, production is declining. In The Netherlands, Italy, Spain, Belgium, Sweden and Denmark, the number of active growers is also declining. The average production per company however increases, resulting in stable overall production figures. Furthermore, East-European countries like Poland and Hungary are showing a recovery, and even growth, in cut flower production. Overall, it is estimated that total EU production value will remain more or less stable for the coming years.

Major trends in EU production:

- Decreasing production area and number of producers, but a stable production output as a result of up-scaling and improvements in productivity.
- Specialization in certain products. This is particularly noticeable in rose production. EU producers of rose are switching to large-budded varieties under competition pressure from developing country suppliers of 'sweethearts' (i.e. small-budded varieties).
- Shift of production from central and northern Europe towards peripheral Europe.
- Overproduction of certain varieties which pushes prices down, particularly in the case of roses.

Trade channels

In the EU, auctions are the major instruments in the trade of flowers: about 30-40% of flowers are sold at auctions. The main auctions are located in The Netherlands. Most of the flowers from developing countries are channeled to EU countries through the actions..

The buyers at the auctions consist mainly of wholesalers. Their task is to purchase large amounts of flowers and break this bulk into smaller amounts. Some (importing) wholesalers purchase their products directly from growers. By bypassing the auctions, these wholesalers save some of the costs associated with the auctioning, such as handling costs.

There is a strong tendency towards concentration in the EU wholesale trade. The number of wholesalers is decreasing and those remaining become more specialized in market segments. Moreover, the role of many wholesalers has changed and they have become more involved in providing logistics service, inspecting/assuring quality and channeling the streams of flowers.

However their role as assemblers of a broad assortment of products remains indispensable in the chain.

In EU countries, flowers are mostly sold through traditional florists and small flower shops. However, the importance of the supermarket at the retail level has increased during the recent years due to their convenience for buyers. The direct involvement of supermarkets has had a particularly large impact on the trade of small- to medium-sized rose varieties. The buyers were less demanding for quality and almost all qualities could be sold in the past. Nowadays, however, supermarket channels are becoming ever stricter on quality requirements and promote sales of quality flowers.

Imports

The EU is the largest importer of flowers and foliage in the world. The economic slowdown and the subsequent decrease in purchasing power in many EU countries between 2002 and 2004 had a negative effect on consumption and, subsequently, on imports of cut flowers. As the economy recovered in 2005 and consumption and imports of flowers increased again and the flower imports in the EU reached €3.4 billion in 2006.

About half of the flower imports in absolute values are accounted by Germany and the UK. Only 24% of total imports were imported from outside the EU. However, this share is increasing. The Netherlands is the leading importer of cut flowers and foliage from outside the EU, accounting for more than half of these imports. However, most of the Dutch imports are re-exported to other EU countries. Large imports and local production provide for dominating position of The Netherlands in supplying cut flowers and foliage to other EU countries. Besides The Netherlands, other cut flower suppliers to the EU contributing big shares were Kenya, Colombia, Ecuador and Israel.

During the last decade, Rosa dominated in the EU imports of fresh cut flowers. Its imports have increased by 4% annually during the last five years. Developing countries mainly supply Rosa; and also play a significant role in supplies of summer flowers and Dianthus.

Opportunities for imports from developing countries are:

- Higher demand for high-quality products;
- Shift of adding value from the wholesaler towards the growers in developing countries;
- Off-season supplies;
- Bouquets;
- Supplying via Netherlands auctions

Threats to imports from developing countries are:

- Poor reputation of suppliers from developing countries: low professionalism, insufficient experience and problems in logistics;
- commercial attitude)
- Increasing airfreight rates;
- Retail chains increasingly require suppliers and products to be certified;
- Fierce competition and low prices in market for roses and carnation;
- Competition from East European countries.

4. EU as a possible sales market for Georgian agricultural and processed products

4.1 Introductory information on the Common Agricultural Policy of EU

The founding member-countries of EU introduced the common agricultural policy (CAP) 50 years ago. The objectives of the CAP were improvement of agricultural production and productivity, stabilization of markets and improvement of living standards for farmers, which had suffered from low world prices. A common organization of the agricultural markets (COM) was introduced and CAP gradually replaced national market organizations and now exists for most EU agricultural products. The CAP includes subsidy payments for crops and cultivated land, price support mechanisms, import tariffs and quotas (for some goods outside the Union). EU removed obstacles of agricultural trade within the Union and maintains a common customs barrier with respect to third countries. Food safety and quality, environmentally sustainable production and the term value for money are now highly respected concepts.

The legal basis of EU-Georgia relations are formed by the EU-Georgia Partnership and Cooperation Agreement (PCA), which was signed in 1996 and entered into force in 1999. It established basis for bilateral relationship between EU and Georgia, which emphasizes adherence to democracy, international laws, human rights and free market economy. The PCA establishes favorable ground for cooperation in trade, investment, economic and legislative cooperation etc. It removes trade quotas and provides for the protection of intellectual, industrial and commercial property rights.

EU has included Georgia in the General System of Preferences (GSP) since 1999 that removed customs duties for some Georgian exports to the European Union market. In 2005 Georgia was granted the second arrangement under the EU General System of Preferences known as Special Incentive Arrangement for Sustainable Development and Good Governance (GSP+), which expires by the end of 2008. The EU GSP+ arrangement comprises 7200 products. Georgian exports of these products to the EU are subject to no or reduced custom duties¹. E.g., for goods and products liable to pay only tax (the ad valorem tariff or a specific tariff) the GSP+ provides for the suspension of such duty. For goods and products liable to pay both ad valorem and specific duties, GSP+ provides for the suspension of the ad valorem duty only. Certain products are not covered by the GSP+ and are therefore liable to pay full duties when entering the European Union, e.g. wine.

Three conditions must be met, while entering into the European Union to benefit from the GSP+ scheme: 1) the Georgian goods exported to the European Union must have originated in Georgia, 2) only goods directly transported from Georgia to EU are eligible and 3) valid proof of origin must be submitted².

However, GSP+ does not eliminate the necessity for Georgian products to comply with technical and phytosanitary requirements of EU.

¹ There are several types of import duties for goods and products entering the European Union: Ad valorem tariff and specific tariff, which in many instances are applied in a combined manner. An ad valorem tariff is a duty paid as a percentage of the import price. If for a certain product the ad valorem tariff is 10%, to import €100 worth of this product, one will have to pay €10 to import this product into the European Union. A specific tariff is a duty paid per physical unit: e.g. kilo, liter, percentage of alcohol content. If for a certain product the specific duty is €1 per kilo, to import 100 kg of this product into the European Union, one will have to pay €100.

² The Certificate of Origin Form A, The Invoice Declaration, which can be used for low value GSP+ exports and The Movement Certificate EUR1

4.2 Relevant conditions for the import of agricultural and processed products

The legal framework, which regulates importation of food to European Union (EU), is very complex. It incorporates import and food regulations of EU, as well as the food law of the member country of the destination. Besides the EU regulations, there are EU directives that the member countries are obliged to enact and therefore these directives should be taken into account by third-countries while importing to EU. There are two types of directives: horizontal and vertical. Horizontal directives provide general facts regarding broad classes of food, while the vertical directives may regulate composition of food for a narrow range of products. Also, EU-members can have national guidelines that have to be taken into account.

When consignment of food enters an EU-country, mutual recognition principle in the single market is in force, which means that the shipment can be exported further to other EU-member country. However in some cases mutual recognition is affected by the right of the member-country of destination to check the equivalence of the product to its own technical rules on the product such as its composition, quality, safety and information provided on the label.

4.3 The EU food, food quality and customs legislation

4.3.1 Hygiene regulations

Legal framework to control hygiene of foodstuffs

The purpose of hygiene regulations of EU is to protect human health and consumer's interests and provide for efficient functioning of the EU market. The foundation of the hygiene regulations in EU is formed by regulation (EC) No 178/2002 on general principles and requirements of food law, which establishes the European Food Safety Authority and outlines procedures in matters of food safety. The regulation formulates definitions and principles for the whole system of food production and distribution in EU. This regulation was passed on January 28, 2002 by the European Parliament and the Council, but it has been in force since 2005.

Regulation No 178/2002 provided the basis for developing new food hygiene rules. The new hygiene package integrates:

- Regulation (EC) No 852/2004 on the hygiene of foodstuffs, which promotes a new regime relating to food hygiene;
- Regulation (EC) No 854/2004, which strengthens the official control on livestock products intended for human consumption (including several amending acts);
- Council Directive 2002/99/EC, which lays down the animal health rules governing the production, processing, distribution and introduction of products of animal origin for human consumption);
- Regulation (EC) No 882/2004, which outlines the principles of official controls to be performed to ensure the verification of compliance of the production in question with feed and food law, animal health and animal welfare rules.

General conditions and specific provisions for foodstuffs of non-animal origin

Import of foodstuffs of non-animal origin to EU must comply with the following rules:

- a) General principles and requirements of Food Law established in Regulation (CE) No 178/2002;
- b) General foodstuffs hygiene rules according to Regulation (EC) No 852/2004;
- c) General conditions concerning contaminants in food;

- d) Special provisions on Genetically Modified (GM) food and Novel food of Regulation (EC) No 1829/2003 and Regulation (EC) No 258/97;
- e) General conditions of preparation of foodstuffs;
- f) Official control of foodstuffs;

The EU has right to stop imports from a third country, if a serious hygiene problem, posing a risk to human health, arises or spreads in the concerned third country.

a) General principles and requirements of Food Law

Regulation (EC) No. 178/2002 outlines the basic food law requirements applying to all food imported into the European Union (EU), which among other topics covers: 1) compliance/equivalence, 2) traceability and 3) responsibilities of food importers.

1. It is imperative that imported foodstuffs comply with the relevant requirements of food law or conditions recognized by the EU or be at least equivalent to them.
2. According to the Regulation, traceability is the ability to trace and follow food and ingredients through all stages of production, processing and distribution. The traceability provision is obligatory for all food production units, including specific sectors such as beef, fish, Genetically Modified (GM) food, etc. Importers are similarly required to identify from whom the product was exported in the country of origin. Usually, the requirement for traceability is limited to ensuring that businesses are at least able to identify the immediate supplier of the product in question and the immediate subsequent recipient, with the exemption of retailers, which are not required to identify the final consumers.
3. Responsibilities of food importers: Food business operators are responsible for ensuring that food products meet all requirements of the food law at all stages of production, processing and distribution within their businesses. If there is evidence that imported food is not in compliance with the food law, the importer must inform about it the competent authorities and withdraw the food.

b) General foodstuffs hygiene rules

Regulation (EC) No. 852/2004 outlines the following hygiene rules, which must be observed if third-country food business operators plan to export their products to EU:

- Monitoring safety of the food products and processes as a responsibility of the operator;
- General hygiene provisions affecting primary food production and detailed requirements for all stages of production, processing and distribution of food;
- Microbiological requirements for certain products which are formulated in Regulation (EC) No. 2073/2005;
- Procedures incorporating approaches of the Hazard Analysis and Critical Control Point (HACCP) system;
- Approval and registration of establishments.

c) General conditions concerning contaminants in food

Food can be contaminated at various stages of production and marketing, as well as result of environmental pollution. The contaminant substances endanger food safety; therefore, EU has established regulations to reduce the risk through maximum levels for some contaminants in foodstuffs.

i) Maximum levels of contaminants

Regulation (EC) 1881/2006 lists contaminant levels four different categories of contaminants (nitrates, aflatoxins, heavy metals and 3-MCPD) that can not be exceeded in foodstuffs such as fruit, vegetables, nuts, cereals, fruit juices, etc. The maximum

contaminant levels relate to both edible part of the foodstuffs and ingredients used for the production of compound foodstuffs

ii) Maximum levels of pesticide residues

Three Council Directives 76/895/EEC, 86/362/EEC and 90/642/EC regulate pesticides residues in food. They allow the EU countries for restricting marketing of products, if the quantity of the residues they contain exceeds the permitted levels. They cover plant products such as fruits, vegetables, cereals etc. They are applied to fresh, dried, processed and ingredients that are included in a composite food.

The above mentioned regulations will be repealed by Regulation (EC) No 396/2005, which was approved by the European Parliament and the Council on 23 February 2005. This regulation establishes maximum residue levels of pesticides in plant and animal products and lays down the maximum quantity of pesticide residues that can be contained in food products and will harmonize maximum limits for all foodstuffs instead. The new regulation establishes a priori 'default' limit below 0.01 mg/kg. The respective maximum pesticide levels will be listed in the annexes.

iii) Permitted levels of radioactive contamination of foodstuffs

The maximum radioactive contamination levels of food products, which may be marketed following a nuclear accident or any other case of radiological emergency are given in Regulations (EC) 3954/1987 and 944/1989. For minor foodstuffs (i.e. those which are consumed least), the maximum permitted levels are considerably higher.

iv) Materials intended to come into contact with foodstuffs

Materials that come into contact with foodstuffs must not contaminate food and transfer their constituents to food in amounts that threaten human health, affect the composition of the food or change the taste and odor of foodstuffs. The Regulation (EC) No. 1935/2004 establishes a list of groups of materials and articles (such as plastics, ceramics, rubbers, paper, glass, etc.) use of which may be regulated through measures including a list of the authorized substances, special conditions of use, purity standards, etc.

d) Provisions on genetically modified food

Food, which contains or is derived from **Genetically Modified Organisms**, can gain access to the EU market only through a single authorization procedure. Risk assessment, which is carried out by the European Food Safety Authority (EFSA), is an essential part of the procedure. Before placing such product in the EU market, the interested party must send an application to the competent authority of a Member State and then referred to EFSA.

The Commission prepares a proposal for granting or refusing the permit taking into account the risk assessment results. The Standing Committee on the Food Chain and Animal Health must approve the proposal. The EU has the Community Register of GM food and feed, which registers authorized GM food and feed.

e) Provisions on novel food

Foods and food ingredients that had not been used for human consumption to a significant degree within the EU before 15 May 1997 are considered as **Novel foods**, which also undergo a safety assessment before being placed on the EU market. Risk assessments are carried out by a competent body of a Member State, which receives applications from companies willing to place novel foods on the EU market. A simplified procedure is applied in case of novel foods or food ingredients, which are not substantially different from existing ones: only a notification from the company is required.

f) General conditions of preparation of foodstuffs

The rules relating to treatment of food, food ingredients and their conditions of use are also expressed in the EU legislation. There are specific directives for different groups of foods. The directives regulate hygiene and compositional requirements, permitted additives, purity criteria, requirements of labeling, etc.

i) Authorized food additives and flavorings

There are several horizontal directives, which define general facts concerning preparation of foodstuff. Additives are given special consideration in Council Directive 89/107/EEC. The directive promotes the approximation of the laws of the EU countries on food additives, which are used in foodstuffs.

Colorants, which may be used in foodstuffs and their conditions of use, are harmonized in Directive 94/36/EC on colors for use in foodstuffs and in its amending acts.

Directive 94/35/EC provides criteria for sweeteners, are used in foodstuffs. Directive 94/35/EC has been elaborated from the framework Directive 89/107/EEC on food additives. It applies to food additives that impart a sweet taste to foodstuffs, as well as to table-top sweeteners. It does not apply to food products that have sweetening properties, e.g. honey.

Council Directive 95/2/EC establishes criteria for food additives other than colorants and sweeteners. Council Directive 78/663/EEC contains specific purity criteria for emulsifiers, stabilizers, thickeners and gelling agents established for use in foodstuffs. Flavorings that are used to impart odor and/or taste to food are regulated by Council Directive 88/388/EEC, which also includes flavorings and foodstuffs imported into EU.

After approval of Council Decision 88/389/EEC on 22 June 1988, the EU countries established common lists of the source materials and substances that are used in the preparation of flavorings. Only those substances may be used as food additives, which are included in the approved common lists (e.g. preservatives, sweeteners, colorants, stabilizers, emulsifiers, raising agents, etc). The conditions of use of the food additives are also specified in those lists.

ii) Preparation and treatments of certain foodstuffs

There are also rules in relation with the manufacture, marketing and importation of foods and food ingredients that are subject to specific treatments such as Council Directive 89/108/EEC on quick-freezing or Directive 1999/2/EC on ionizing radiation.

4.3.2 Presentation and labeling of food

General rules

All foodstuffs marketed in EU must comply with EU labeling rules. The labeling rules ensure that consumers get all essential information to make informed choices while buying food. There are general rules for food labeling and as well as specific provisions for certain groups of products.

Besides these mandatory rules, there is also additional information that may be included by the manufacturers on a voluntary basis; however they must ensure that additional details are accurate and do not mislead the consumer. Nutritional labeling (e.g. "low fat", "high fiber", etc.) is an example of non-obligatory labeling. However if non-obligatory labeling is used such as nutritional claim, it must comply with a standardized format, pursuant to Council Directive

90/496/EEC. Similarly, the use of the organic label is regulated by Council Regulation (EEC) 2092/91.

Rules on food labeling

The content of labels of foodstuffs is laid down by Council Directive 2000/13/EC:

- The most important component of the label is the generic name of the product. Brand names and trademarks may be used in addition but can not substitute the generic name. The food label must include details on the physical condition of the foodstuff or the specific treatment it has undergone (e.g. deep-frozen, grounded, powdered, freeze-dried, concentrated, smoked, etc.) if their omission may confuse the buyer.
- It is required that all ingredients (including additives) be listed in descending order of weight and by their specific name. The list must be preceded by word "Ingredients". If products contain ingredients that may cause allergies or intolerances, such as alcoholic beverages, the word "contains" followed by the name of the ingredient should be indicated. This indication will not be necessary, if the list of ingredients includes the specific name.
- Indication of the net quantity of pre-packaged foodstuffs is also necessary (in metric units).
- For perishable goods, it is necessary to indicate the date of minimum durability preceded by the words "best before" or the "use by" date.
- Conditions/instructions for keeping or use, if appropriate.
- Place of origin or provenance
- Names and addresses of the manufacturer, packager or importer established in the EU.
- Alcoholic strength for beverages, which contain more than 1.2% by volume.
- Lots should be indicated on pre-packaged foodstuffs, which should be preceded by the letter "L".

Specific provisions for certain groups of products

There are also labeling rules which apply to specific groups of food products to provide consumers with more detailed information on the contents and the composition of these products:

a) Genetically modified organisms

Foods that contain GMOs or are obtained from GMOs and are approved for marketing in EU are subject to labeling requirements pursuant to Regulations (EC) 1829/2003 and 1830/2003. In the case of pre-packaged products, it is absolutely necessary to indicate that "This product contains genetically modified organisms".

b) Food products for particular nutritional purposes

Food products for particular nutritional purposes include dietary foods for special medical purposes, baby foods, foods for sportspeople, foods for weight reduction, etc. Specific provisions apply to them (e.g. declaration of the fat content, energy value, carbohydrate content, protein and etc.), which is stated in specific Directives.

c) Food flavorings and additives

Flavorings and additives must be listed on the packaging by their category (anti-oxidant, preservative, color, etc) including their name or E-number. When additives are sold as such to food producers and consumers, other provisions on labeling apply, which are provided in Directives 89/107/EEC and 88/388/EEC.

d) Materials contacting with food

Regulation 1935/2004 requires that packaging materials and containers coming into contact with foodstuffs be labeled "for food contact" or bear the label of a glass and fork.

e) Particular foodstuffs

There are certain products for which special provisions in relation with the labeling are laid out in specific EU directives.

4.3.3 Marketing standards

Marketing standards of fruits and vegetables

Fresh fruit and vegetables, as well as certain types of dried fruit are covered by a common market organization. The exceptions or products not covered by this regime are potatoes, grapes, bananas, sweet corn, peas, fodder beans and olives. The general rules are established in the Council Regulation (EC) No 2200/96 on the common organization of the market in fruit and vegetables, which outlines the requirements of standardization of products, intervention arrangements, and arrangements concerning trade with third countries. Marketing standards are enacted per regulation by the European Commission. They apply directly for every Member State and in all trade levels. Marketing standards exist for many fresh fruit and vegetables, e.g. apricots, pears, beans, peas, cherries, carrots, tomatoes, watermelons etc. Table 3 lists regulations on marketing standards of some other fruit and vegetables, which are more relevant for West Georgian farmers.

Table 3: Commission regulations laying down marketing standards of some fruit and vegetables

Citrus	Commission Regulation (EC) No 1799/2001 of 12 September 2001 - marketing standard for citrus fruit
Kiwifruit	Commission Regulation (EC) No 1673/2004 of 24 September 2004 - marketing standard applicable to kiwifruit
Peas	Commission Regulation (EC) No 2561/1999 of 3 December 1999 - marketing standard for peas
Cherries	Commission Regulation (EC) No 214/2004 of 6 February 2004 - marketing standard for cherries
Carrots	Commission Regulation (EC) No 730/1999 of 7 April 1999 - marketing standard for carrots
Tomatoes	Commission Regulation (EC) No 790/2000 of 14 April 2000 - marketing standard for tomatoes
Walnuts	Commission Regulation (EC) No 175/2001 of 26 January 2001 - marketing standard for walnuts in shell
Hazelnuts	Commission Regulation (EC) No 1284/2002 of 15 July 2002 - marketing standard for hazelnuts in shell

The competent authorities perform documental and/or physical inspections of the imported products to check their compliance with the following requirements of the EU marketing standards:

- Quality standards: minimum requirements (moisture, free from pests, cleanness), and classification (quality class fixed: Extra Class, Class I, Class II);
- Sizing standards;
- Presentation standards;
- Marking standards.

According to Regulation (EC) 1182/2007, fruits and vegetables which are intended to be sold fresh to the consumer, may only be marketed if they are sound, fair and of marketable quality and if the country of origin is indicated.

The goods can not be released for circulation, unless a certificate of conformity to the marketing standards is presented by the importer at the point of importation. The certificate of conformity is issued by inspection bodies according to the sample given in Annex III to Regulation (EC) No 1580/2007. Identification of non-conformity will deter importation of the goods.

If imports are beneath a real import price an additional tax is collected to protect producers in EU from cut-price imports from third countries. The so-called Entry-price-system is of most importance in the trade of fresh fruits and vegetables.

Processed fruit and vegetable products

The basic provisions on processed plant products are specified in the Council Regulation (EC) No 2201/96 on the common organization of the markets in processed fruit and vegetable products. At present, marketing standards merely exist for dried grapes. For processed products certain directives have to be considered additionally, depending on the processed end product. These include horizontal as well as vertical directives. In Table 4, some directives which may be of importance for the study are listed.

Table 4: Council directives on marketing standards of some food products

Quick frozen products	Council Directive 89/108/EEC of 21 December 1988 on the approximation of the laws of the Member States relating to quick-frozen foodstuffs for human consumption
Fruit jams, jellies, etc	Council Directive 2001/113/EC of 20 December 2001 relating to fruit jams, jellies and marmalades and sweetened chestnut purée intended for human consumption
Fruit juices	Council Directive 2001/112/EC of 20 December 2001 relating to fruit juices and certain similar products intended for human consumption
Packaging of liquid products	Council Directive 75/106/EEC of 19 December 1974 on the approximation of the laws of the Member States relating to the making-up by volume of certain prepackaged liquids. It relates to packages containing the liquid products listed in Annex III, measured by volume for the purpose of sale in unit quantities varying between 5 milliliters and 10 liters.

The EU marketing standards do not cover imports of products intended for processing. However, Regulation (EC) 1580/2007 requires that the packaging of products meant for processing be labeled by the words "intended for processing".

4.3.4 Plant health control

General principles

Phytosanitary measures are intended to prevent the introduction and spread of pests and harmful organisms across the boundaries. Enforcement of these measures is required by the International Plant Protection Convention (IPPC), to which EU States are contracting parties and which sets out the basic rules and control procedures to secure a common and effective protection of agricultural and forestry resources.

The IPPC requires every contracting country to establish a national plant protection organization to inspect growing crops and to report on pests and control them. A complete listing of the national plant protection organizations (NPPOS) can be found at the official website for the IPPC (<http://www.ippc.int/>).

Directive 2000/29/EC establishes the following protective measures for the imports into the EU of plants, plant products and any other material, which may harbor plant pests (e.g. wooden products and containers, soil, etc):

- Import bans;

- Phytosanitary certificate;
- Customs inspection and plant health checks;
- Importers Register;
- Advance notice on imports.

The directive establishes several exemptions for each phytosanitary measure (e.g. plants and plant products for trial, scientific purposes, work on varieties selection; internal transit; small quantities that do not pose a risk of spreading harmful organisms etc.). They are usually granted for a limited period, subject to special import conditions and to a specific license.

Phytosanitary certificates

An official “phytosanitary certificate” must accompany imports of plants and plant products listed in Annex V, Part B of Directive 2000/29/EC. If the consignment after being dispatched from a third country, has been stored, repacked or split up in another non-EU country, a “phytosanitary certificate for re-export” will be required. Phytosanitary certificates certify phytosanitary conditions of plants and plants products and also that the shipment has been officially inspected, it is free of quarantine pests and pathogens and complies with requirements for entry into the EU.

Phytosanitary certificates are made up by the designated authorities of the third country at least in one of the official languages of the EU. They must be issued not more than two weeks before the date on which the shipment covered by it has left the country of issuance.

Phytosanitary certificates shall be compliant with the provisions of the IPPC and the FAO International Standard for Phytosanitary Measures No 12 on Guidelines for phytosanitary certificates.

Customs inspection and plant health checks

The responsible official bodies carry out customs inspections and supervision of plants and plant products listed in Annex V, Part B of Directive 2000/29/EC when they cross the border of EU.

Importers register

All importers of plants and plant products listed in Annex V, Part B of Directive 2000/29/EC must be given an official registration number and included in an official register of an EU country.

Advance notice on imports

Member States may require that the customs office and official body at the point of entry be informed by airport/harbor authorities, importers or operators in advance about imminent arrival of a shipment of plants and/or plant products which may contain pests. Some emergency measures may apply to plants and plant products in addition and without violating Directive 2000/29/EC.

4.3.5 Import license

Imports may be subject to an import license. Commission Regulation (EC) No 1291/2000 lays down basic provisions governing license procedures and common detailed rules of the system of import/export licensing of agricultural products. Besides, specific sector regulations, which determine license obligations for individual products, are to be considered.

4.3.6 Cut flowers

Flowers are covered by a common market organization, the principles of which were stipulated in Regulation (EEC) No 234/68 on the establishment of a common organization of the market in live trees and other plants, bulbs, roots and the like, cut flowers and ornamental foliage. This regulation was last amended by the regulation (EC) Nr. 3290/94. To facilitate their marketing within the EC, quantitative standards and detailed rules for trade were laid down. Imports from third countries have to fulfill these standards/ rules (or comparable standards). Regulation (EEC) No 316/68 outlines marketing standards (quality specifications) for fresh cut flowers and fresh foliage, while Regulation (EEC) No 315/68 specifies marketing standards for bulbs, tubers and tuberous roots.

The trade with cut flowers is liberalized, that means, neither an authorization concerning foreign trade and payments law, nor a license is needed, assumed that fresh cut flowers comply with the quality specifications of the EU. The following live plants and floricultural products will be spot-checked by the Federal Agency for Agriculture and Food (BLE) when imported:

Table 5: Live plants and floricultural products which are spot-checked by BLE, when imported

Commodity Code	Identification
0603 10 10	roses, fresh
0603 10 20	pinks, fresh
0603 10 30	orchids, fresh
0603 10 40	gladioluses, fresh
0603 10 50	chrysanthemum, fresh
0603 10 80	Other fresh cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes

4.3.7 Products from organic production

The placing on the EU market of livestock, unprocessed crop and animal products as well as other processed agricultural products to be used as food or animal feed labeled as “organic” (also bio, eco etc.) must comply with the requirements of Council Regulation (EEC) No 2092/91.

These rules established by Regulation 2092/91 cover mainly the following aspects:

- Methods for organic agricultural production of crops and livestock, including beekeeping (outlined in Annex I of Regulation 2092/91)
- Processing organic agricultural products into foodstuffs (Annex IV). A list of ingredients authorizations is available in the **Data base of the Organic Farming Information System (OFIS)** official website: http://ec.europa.eu/agriculture/qual/organic/data/index_en.htm
- Label “organic” and reference to organic production methods may be used only for products, which meet all requirements of the Regulation.

Organic products from third countries may only be marketed in EU as organic products, if the organic production practices by which they have been produced and the inspection arrangements by which the production practices have been verified are compliant or equivalent to the rules laid down in Regulation 2092/91. Imports of organic products into the EU are carried out according to the following schemes established by Council Regulation 1991/2006 (which amended Regulation 2092/91):

Country authorization – the European Commission examines requirements imposed on organic production and measures applied to ensure effective inspection/certification procedures in the third-country concerned. If the rules are equivalent, the country is included in the list of authorized countries, which is established by the Commission Regulation (EEC) No 94/92.

Control by recognized inspection body or recognized inspection authority – The Commission maintains a list of inspection bodies competent to carry out inspections in countries not included in the list of authorized third countries. The inspection bodies verify that products have been produced in accordance to the organic standards, which are compliant or equivalent to the EU regulation. Only those products, labeled as organic can be imported to EU, which have been produced under control of the recognized inspection bodies.

Authorizations to importers on a case by case basis – There is a parallel system, which enables the EU countries to issue an import permit for organic product shipments from third countries, which are not included in the above mentioned lists. This system can be used if importers are able to prove that their products are produced according to production rules, which are equivalent to Regulation 2092/91. The Member State, which issues such authorization, notifies the European Commission and the other EU states about it.

In 28 June 2007, the European Council approved Regulation (EC) No 834/2007, which would repeal Council Regulation 2092/91 starting from January of 2009. Detailed rules for implementation of the latter regulation are given in Council Regulation (EC) No 889/2008, which was approved in 5 September 2008.

5. Results, comments and outlook

5.1 Alternative crops

One aim of this study was to illustrate the possibilities of alternative crop cultivation in the Subtropical area of Georgia with special regard of the prevailing local conditions high rainfall (>1200 mm), mild winters and hot summers and soil type (podzolic, acid pH 4.5-6.0).

Among the crops in question, which could complement production of citrus and tea in West Georgia are, above all fruits such as **blueberries, blackberries, and raspberries**. They are often considered as fruits of the temperate zone but experiments have proven that they can be successfully grown in West Georgia due to their good adaptation to acid soils. These crops have relatively stable markets for both their natural and processed forms and represent good marketing opportunities for the Georgian producers.

Among the subtropical fruits, **kiwifruit** and **persimmon** deserve special attention as have high economic value and growing markets in Europe and the former Soviet Union countries. **Mulberries** and **feijoa** could be very interesting as they already exist in gardens. They could be considered especially in view of further processing (e.g. fruit juice), as in Europe (in particular Germany) there is a trend towards uncommon fruit and fruit juice combinations.

In terms of **grape**, American species (e.g. *Vitis labrusca*) and crosses of the European varieties with the American varieties are of interest because of their adoption to high summer rainfall areas in subtropics and high disease tolerance. Both fresh and processed (juice and wine) could find market in Europe. Again, local varieties may cater to the specialists' markets in EU.

Remarkable marketing opportunities are associated with vegetables (e.g. **okra, different cabbages and onions, celery, dill** etc.) and spices, which usually better adapt to neutral soils but can be grown well in West Georgia after liming of soil.

Oil producing plants require considerable attention. **Soybean**, which has been cultivated for more than a decade still occupies very little area and could play an important role as an oil-producing plant, as well as a rotation crop in the maize based systems. **Flax**, which used to be a traditional crop for the area in the ancient times, can be used for oil and fiber production. There is an experience of production of tung-oil (also called wood oil) from **tung-tree** in the West Georgia, which could be extended. Furthermore, attention should be given to **safflower**. Safflower has a double utility, namely the red dyestuff of the blossoms and the oil of the embryos. The oil consists to 74% of essential linolic acids, which is highly nutrient.

Topinambur is another interesting option, e.g. for production of alcohol through fermentation. It also gives the highest results in fish feeding trials.

Also, **processed fruit and vegetable products** are a possibility. Factories for e.g. packing fruit juice and wine (and strong alcoholic beverages) already exist in the area.

In view of a possible cultivation of **cut flowers** and **landscape plants** it has to be mentioned that Georgia has favorable environment for their greenhouse production all year round, but may need to invest in establishing infrastructure for continuous cooling cut flowers on site and during the transport.

5.2 Export opportunities

The location of Georgia at the crossroad connecting Europe and Central Asia and its convenient ports at the Black Seas coast represent an advantage and both fresh and processed fruits and vegetables can be easily marketed in the EU. However, the European markets are very competitive and the Georgian producers will have to cope with strong rivals. It should also not be forgotten that agricultural production in many countries is subsidized, while in the Georgian agriculture is not. Besides, many traditional suppliers have the advantage of economies of scale, which the Georgian producers still need to develop.

The best opportunities for exporters from Georgia lie in creating or adapting products that serve market segments and capitalize on trends in consumption, production and trade. Successful products need to be of high quality, and comply with demands for certification and food safety, and the demand for supplying large volumes due to consolidation in buyers markets. These trends and market developments offer both opportunities and threats to Georgian exporters. These should always be analyzed in relation to exporter's specific circumstances to determine whether they provide opportunities or threats.

It is not likely that Georgian exporters of fruits and vegetables will be competitive in the commodity markets in the nearest future, as they require economies of scale and very high cost-efficiency of production. Therefore, the Georgian exporters should focus on production of quality products and target niche markets. These products could well be fruits, berries and vegetables or products where Georgian producers have a long-standing history and advantage, such as wine varieties. These products could cater to a high-price specialty market. Good opportunities exist with subtropical and off-season fresh fruits and vegetables, added value products (ready products), participating in offshore outsourcing and supplying the new EU member states where consumption levels are increasing.

Similarly, organic and fair-trade products seem to be providing more-promising opportunities as the supplies have lagged behind the demand in most of the developed countries. The expertise in organic production of fruits and vegetables has still to be developed in Georgia and may require some time. However, harvesting wild plants in natural habitats with simple processing (such as drying) could be one of the ways to start and achieve quick successes in the European organic markets.

In addition, special attention should also be given to the traditional agrarian products planted in the West Georgia, because these have the advantage of already being grown and accepted by farmers. Furthermore, other sales markets would also be worth of investigating, e.g. the markets of Georgia's neighboring countries or the Asian market. Further research must also focus on the transport systems and transport costs.

Cut flowers are probably the best option for Georgian exporters to access the mass-markets in Europe. There are sufficient resources for producing demanded cut-flowers during the whole year and in sufficient quantities to link with the buyers requiring large volumes of supplies. This, in couple with the convenient location and efficient transportation could lead to success in the foreseeable future.

5.3 Outlook

To promote production of alternative crops supplementary scientific research will be absolutely necessary. Beneath the prevailing local conditions, special regard has to be given to further conditions of cultivation of the crops in question (e.g. vegetation period, dormancy period, etc). Also, data about the potential yield, as well as production costs versus revenues would be necessary. Furthermore, the acceptance by the farmers for the respective alternative crops has to

be investigated in order to not only get theoretical alternatives. Introduction of improved germplasm and development of breeding research will be required for most of the crops to achieve high yields and quality products and target more precisely consumer preferences.

The development of export-oriented agricultural production should be supported by the Georgian government, which needs to implement policies for strengthening competitiveness of the Georgian agriculture. It should be noted that the European agriculture, as well as many suppliers to the European market are backed through food safety policies (equivalent to EU) and developed agricultural research and extension. Recognized food safety systems facilitate access to the EU market, while agricultural research and extension systems make adapted varieties and production technologies, quality seed and planting material readily available for the producers. No doubt that improved food safety systems and adequate agricultural research and extension policies could enhance chances of the Georgian producers to compete on international markets.

Georgia, as a former soviet-union country, needs to establish itself as a reliable partner in the international markets. The Georgian government should conduct image campaigns that aim at improving the country's image as a quality food producer, in order for the national production to succeed in the EU.

The present study reviewed the conditions governing food law and quality, as well as customs legislation and the market situation of these groups. Nevertheless, in order to succeed, it would be necessary for any would-be exporter to make a specific and exact investigation of the respective products themselves. This includes import regulations as well as a complete market analysis.

Acknowledgments

This study was carried out under aegis of the CGIAR Collaborative Research Program for Sustainable Agricultural Production in Central Asia and the Caucasus and was facilitated by the ICARDA Program Facilitation Unit.

This study used experience and data collected by researchers of RI of Tea, Subtropical Crops and Tea Industry, Batumi Botanical Garden, RI of Farming and RI of Plant Immunity, help of which is highly appreciated.

Annexes

Annex 1: Average Monthly Temperature in the subtropical areas of West Georgia (in C^o)

Administrative Districts	Months												Average
	I	II	III	IV	V	VI	VII	VII I	IX	X	XI	XI I	
Near to the Coast													
Ochamchire	4.1	5.3	8.2	11.4	16.1	19.8	22.7	21.1	19.8	15.3	10.2	6.6	13.6
Anaklia	5.4	6.2	8.6	11.6	16.4	20.2	22.8	22.9	19.6	15.4	11.4	7.2	14
Poti	5.4	6.2	9	11.9	16.3	20.1	22.9	23.3	20.5	16.7	11.7	8.1	14.3
Supsa	4	5	8.1	11.5	16	19.6	21.1	22.4	19.4	15.1	10.6	6.8	13.4
Kobuleti	4.2	5.2	7.6	10.8	15	19.3	21.9	22.4	19.4	15.4	10.8	6.8	13.2
Far from the Coast													
Gali	4.4	5.3	8.9	12.2	16.9	20.1	22.9	23	19.6	15.2	10.4	6.8	13.8
Zugdidi	4.9	5.5	8.2	12.3	17	20.3	22.6	22.7	19.2	15.1	10.5	6.8	13.8
Kheta	6.1	6.6	9.7	13	17.3	20.4	22.9	23.1	20.3	17.1	12.3	8.4	14.3
Senaki	5.4	6.2	9.9	12.8	17.6	20.8	22.8	23.2	20.1	16.4	12.2	7.6	14.5
Lanchkhuti	4.2	5.2	8.2	12.2	17.2	20.5	23	23.2	19.8	15.5	10.8	6.8	13.8
Samtredia	4.3	5.5	9.2	13.2	17.9	21.1	23.2	23.1	20.3	16.7	11.4	7.2	14.4

Annex 2: Rainfall in the subtropical areas of West Georgia (in mm)

Districts	Months												Average Year	Cold Period	Warm Period
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII			
Sokhumi	114	118	112	122	97	97	112	114	134	107	128	135	1390	607	783
Ochamchire	127	116	114	90	93	126	133	123	130	125	110	107	1394	575	820
Anaklia	130	106	109	108	70	99	171	155	178	160	114	121	1516	580	936
Photi	128	106	91	79	56	122	168	214	236	166	144	137	1647	606	1041
Sufsa	188	149	141	85	81	131	206	234	314	250	215	195	2189	888	1301
Kobuleti	212	182	148	98	85	144	168	215	318	276	247	222	2315	1011	1304
Batumi	231	189	135	122	81	163	172	230	309	247	288	251	2418	1094	1324
Chaladidi	138	110	95	82	58	127	175	222	246	173	150	142	1718	630	1088
Otobaia	138	124	128	101	102	138	153	130	150	142	125	119	1541	524	917
Gali	130	122	128	125	106	158	161	134	141	135	110	112	1562	602	960
Zugdidi	168	133	137	109	110	148	164	140	161	154	124	129	1657	671	986
Kheta	119	123	98	117	98	137	164	144	174	113	157	164	1607	660	947
Senaki	149	141	133	89	83	131	137	150	177	158	152	139	1639	714	925
Samtredia	127	127	86	84	68	95	104	91	192	121	148	152	1325	640	685
Lanchkhuti	184	151	139	72	74	118	138	144	228	232	172	177	1822	823	999

Annex 3: Plants tolerant humid subtropical humid conditions: crops usable for food, feed, fuel, fiber and other industrial uses

#	Scientific Name	Comon Name
1	<i>Abelmoschus esculentus</i>	Okra
2	<i>Abutilon theoprastris</i>	China jute
3	<i>Acroceras macrum</i>	Nile grass
4	<i>Actinidia arguta</i>	Tara vine
5	<i>Actinidia deliciosa</i>	Kiwifruit
6	<i>Aeschynomene americana</i>	American joint vetch
7	<i>Agave cantala</i>	Cantala
8	<i>Agrimonia eupatori</i>	Agrimony
9	<i>Aleurites cordata</i>	Tung tree
10	<i>Allium ampeloprasum</i>	Leek
11	<i>Allium cepa</i> var. <i>aggregatum</i>	Shallot
12	<i>Allium cepa</i> var. <i>cepa</i>	Onion
13	<i>Allium chinense</i>	Chinese onion
14	<i>Allium fistulosum</i>	Welsh onion
15	<i>Allium sativum</i>	Garlic
16	<i>Allium schoenoprasum</i>	Chives
17	<i>Amaranthus caudatus</i>	Inca wheat
18	<i>Amaranthus cruentus</i>	Purple amaranth
19	<i>Amaranthus hypochondriacus</i>	Prince's feather
20	<i>Amaranthus tricolor</i>	Chinese spinach
21	<i>Anethum graveolens</i>	Dill
22	<i>Apium graveolens</i>	Celery
23	<i>Arachis glabrata</i> var. <i>glabrata</i>	Perennial peanut
24	<i>Arachis hypogaea</i>	Groundnut; peanut
25	<i>Armoracia rusticana</i>	Horseradish
26	<i>Artemisia dracunculoides</i>	Tarragon
27	<i>Asparagus officinalis</i>	Asparagus
28	<i>Atriplex hortensis</i>	Mountain spinach
29	<i>Avena sativa</i>	Spring oat; common oat
30	<i>Axonopus compressus</i>	Savannah grass
31	<i>Beta vulgaris</i> subsp. <i>vulgaris</i> var. <i>altissima</i>	Sugar beet
32	<i>Beta vulgaris</i> subsp. <i>vulgaris</i> var. <i>cicla</i>	Spinach beet
33	<i>Beta vulgaris</i> subsp. <i>vulgaris</i> var. <i>vulgaris</i>	Beet
34	<i>Brassica carinata</i>	Abyssinian mustard
35	<i>Brassica napus</i> var. <i>napobrassica</i>	Rutabaga
36	<i>Brassica napus</i> var. <i>napus</i>	Rapeseed
37	<i>Brassica nigra</i>	Indian mustard
38	<i>Brassica nigra</i>	Black mustard
39	<i>Brassica oleracea</i> var. <i>botrytis</i>	Cauliflower
40	<i>Brassica oleracea</i> var. <i>capitata</i>	Common cabbage
41	<i>Brassica oleracea</i> var. <i>gemmifera</i>	Brussels sprouts
42	<i>Brassica oleracea</i> var. <i>gongyloides</i>	Kohlrabi
43	<i>Brassica oleracea</i> var. <i>italica</i>	Broccoli
44	<i>Brassica oleracea</i> var. <i>rapa</i>	Turnip
45	<i>Brassica oleracea</i> var. <i>sabauda</i>	Savoy cabbage
46	<i>Brassica oleracea</i> var. <i>viridis</i>	Collard
47	<i>Brassica rapa</i> ssp. <i>chinensis</i>	Chinese cabbage
48	<i>Brassica rapa</i> ssp. <i>pekinensis</i>	Shantung cabbage
49	<i>Bromus mango</i>	Bromus
50	<i>Bunium bulbocastanum</i>	Black zira

51	<i>Cajanus cajan</i>	Pigeon pea
52	<i>Calliandra calothyrsus</i>	Red calliandra
53	<i>Camellia sinensis</i>	Tea
54	<i>Canavalia ensiformis</i>	Jack bean
55	<i>Cannabis sativa</i>	Hemp
56	<i>Capparis spinosa</i>	Capers
57	<i>Capsicum annuum</i>	Chili pepper
58	<i>Capsicum annuum</i> var. <i>annuum</i>	Green pepper
59	<i>Capsicum baccatum</i> var. <i>pendulum</i>	Peruvian pepper
60	<i>Capsicum frutescens</i>	Tabasco
61	<i>Capsicum pubescens</i>	Rocoto
62	<i>Carthamus tinctorius</i>	Safflower
63	<i>Carum carvi</i>	Caraway
64	<i>Carya illinoensis</i>	Pecan nut
65	<i>Castanea mollissima</i>	Chinese chestnut
66	<i>Castanea sativa</i>	European chestnut
67	<i>Ceratonia siliqua</i>	Carob, locust bean
68	<i>Cicer arietinum</i>	Chickpea
69	<i>Cichorium endivia</i>	Endive
70	<i>Citrulus lanatus</i>	Watermelon
71	<i>Citrus aurantiifolia</i>	Lime
72	<i>Citrus aurantium</i>	Sauer orange
73	<i>Citrus limetta</i>	Sweet lime
74	<i>Citrus limon</i>	Lemon
75	<i>Citrus madurensis</i>	Calamondin
76	<i>Citrus maxima</i>	Pummelo, shaddock
77	<i>Citrus medica</i>	Citron
78	<i>Citrus paradisi</i>	Grapefruit
79	<i>Citrus reticulata</i>	Mandarin
80	<i>Citrus reticulata</i> var. <i>deliciosa</i>	Tangerine, Clementine
81	<i>Citrus reticulata</i> var. <i>unshiu</i>	Satsuma
82	<i>Citrus sinensis</i>	Sweet orange
83	<i>Citrus x tangelo</i>	Tangelo
84	<i>Corchorus olitorius</i>	Nalta jute; tussa jute
85	<i>Coriandrum sativum</i>	Coriander
86	<i>Corylus avellana</i>	European hazel; filbert
87	<i>Corylus colurna</i> subsp. <i>colurna</i>	Turkish hazel
88	<i>Corylus cornuta</i> subsp. <i>californica</i>	California hazel
89	<i>Corylus maxima</i>	Giant filbert; hazelnut
90	<i>Crambe abyssinica</i>	Crambe
91	<i>Crocus sativus</i>	Saffron
92	<i>Crotalaria juncea</i>	Sun hemp
93	<i>Cucumis melo</i> subsp. <i>melo</i>	Muskmelon
94	<i>Cucumis melo</i> subsp. <i>melo</i> var. <i>conomon</i>	Pickling melon
95	<i>Cucumis sativus</i>	Cucumber
96	<i>Cucurbita ficifolia</i>	Black seed squash
97	<i>Cucurbita maxima</i>	Winter squash
98	<i>Cucurbita moschata</i>	Seminole squash
99	<i>Cucurbita pepo</i>	Summer squash
100	<i>Cuminum cyminum</i>	Cumin
101	<i>Cyamopsis tetragonoloba</i>	Guar
102	<i>Cydonia oblonga</i>	Apple quince
103	<i>Cymbopogon citratus</i>	Sitрата
104	<i>Cymbopogon citratus</i>	lemon grass

105	<i>Cymbopogon martinii</i>	Palma rosa
106	<i>Cynara cardunculus</i>	Cardoon
107	<i>Cynara scolymus</i>	Globe artichoke
108	<i>Cyphomandra betacea</i>	Tree tomato
109	<i>Daucus carota</i>	Carrot
110	<i>Desmodium uncinatum</i>	French honeysuckle
111	<i>Diospyros kaki</i>	Persimmon
112	<i>Diospyros virginiana</i>	American persimmon
113	<i>Echinochloa colona</i>	Jungle rice
114	<i>Echinochloa frumentacea</i>	Barnyard millet
115	<i>Echinochloa pyramidalis</i>	Antelope grass
116	<i>Eleocharis dulcis</i>	Chinese water chesnut
117	<i>Eragrostis tef</i>	Teff
118	<i>Eriobotrya japonica</i>	Loquat
119	<i>Eucalyptus globulus</i>	Tasmanian blue gum
120	<i>Euphorbia lathyris</i>	Caper spurge; mole plant
121	<i>Faba vulgaris</i>	Faba bean
122	<i>Fagopyrum esculentum</i>	Buckwheat
123	<i>Feijoa sellowiana</i>	Feijoa
124	<i>Festuca pratensis</i>	Meadow fescue
125	<i>Ficus carica</i>	Fig
126	<i>Foeniculum vulgare</i>	Fennel
127	<i>Fragaria chiloensis</i>	Beach strawberry; sand strawberry
128	<i>Fragaria vesca</i> subsp. <i>vesca</i>	Woodland strawberry
129	<i>Fragaria x ananassa</i>	Strawberry
130	<i>Glycine max</i>	Soybean
131	<i>Gossypium barbadense</i>	Long fiber cotton
132	<i>Gossypium hirsutum</i>	Cotton
133	<i>Helianthus tuberosus</i>	Jerusalem artichoke
134	<i>Hibiscus cannabinus</i>	Kenaf
135	<i>Hordeum vulgare</i>	Barley
136	<i>Humulus lupulus</i>	Hemp
137	<i>Hypericum perforatum</i>	St. John`s-wort
138	<i>Hyssopus officinalis</i>	Hyssop
139	<i>Ipomoea aquatica</i>	Water spinach
140	<i>Ipomoea batatas</i>	Sweet potato
141	<i>Juglans nigra</i>	Black walnut
142	<i>Juglans regia</i>	Persian walnut
143	<i>Lablab purpureus</i>	Hyacinth bean
144	<i>Lactuca sativa</i>	Lettuce
145	<i>Lathyrus sativus</i>	Chickling vetch
146	<i>Laurus nobilis</i>	Laurel
147	<i>Lavandula angustifolium</i>	French lavender
148	<i>Lavandula angustifolium</i> x <i>L. latifolia</i>	Lavandin
149	<i>Lens culinaris</i>	Lentil
150	<i>Lespedeza cuneata</i>	Sericea
151	<i>Linum usitatissimum</i>	Flax
152	<i>Lotus corniculatus</i>	Trefoil
153	<i>Lotus uliginosus</i>	Hairy big trefoil; big trefoil
154	<i>Lycopersicon esculentum</i>	Tomato
155	<i>Malus domestica</i>	Apple
156	<i>Manihot esculenta</i>	Cassava; manioc
157	<i>Manilkara sapota</i>	Sapodilla
158	<i>Mentha piperita</i> subsp. <i>ubsp. piperita</i>	Peppermint

159	<i>Mentha spicata</i>	Spearmint
160	<i>Miscanthus giganteus</i>	Miscanthus
161	<i>Morus rubra</i>	Mulberry; red mulberry
162	<i>Musa textilis</i>	Manila-hemp
163	<i>Nasturtium officinale</i>	Watercress
164	<i>Nicotiana tabacum</i>	Tobacco
165	<i>Nypa fruticans</i>	Mangrove palm
166	<i>Ocimum basilicum</i>	Basil
167	<i>Olea europaea</i>	Olive
168	<i>Origanum majorana</i>	Sweet marjoram
169	<i>Oryza sativa</i>	Rice
170	<i>Panicum maximum</i>	Guinea grass
171	<i>Panicum miliaceum</i> L.	Common millet
172	<i>Paspalum dilatatum</i>	Dallas grass
173	<i>Paspalum vaginatum</i>	Biscuit grass
174	<i>Pastinaca sativa</i>	Parsnip
175	<i>Pennisetum clandestinum</i>	Nappeir fodder grass
176	<i>Persea americana</i>	Avocado
177	<i>Petroselinum crispum</i>	Parsley
178	<i>Phalaris arundinacea</i>	Reed canarygrass
179	<i>Phaseolus vulgaris</i>	Common bean
180	<i>Physalis peruviana</i>	Cape gooseberry
181	<i>Pimpinella anisum</i>	Anise
182	<i>Piper nigrum</i>	Black pepper
183	<i>Pistacia vera</i>	Pistachio
184	<i>Pisum sativum</i>	Pea
185	<i>Prunus armeniaca</i>	Apricot
186	<i>Prunus avium</i>	Cherry
187	<i>Prunus cerasus</i>	Sour cherry
188	<i>Prunus domestica</i>	Plump
189	<i>Prunus dulcis</i>	Almond
190	<i>Prunus persica</i>	Peach
191	<i>Prunus serotina</i>	Black cherry
192	<i>Pyrus communis</i>	Pear
193	<i>Rhaphanus sativus</i>	Radish
194	<i>Rheum rhaponticum</i>	Garden rhubarb
195	<i>Ribes nigrum</i>	Black currant
196	<i>Rosa damascena</i>	Damask rose
197	<i>Rosa x centifolia</i>	Cabbage rose
198	<i>Rosmarinus x officinalis</i>	Rosemary
199	<i>Rubus argutus</i>	Blackberry
200	<i>Rubus frondosus</i>	Blackberry
201	<i>Rubus strigosus</i>	Red raspberry
202	<i>Salvia officinalis</i>	Sage
203	<i>Satureja hortensis</i>	Summer savory
204	<i>Secale cereale</i>	Rye
205	<i>Setaria italica</i>	Foxtail millet
206	<i>Sinapsis alba</i>	White mustard
207	<i>Solanum melongena</i>	Eggplant
208	<i>Solanum muricatum</i>	Melon pear
209	<i>Solanum tuberosum</i>	Potato
211	<i>Sorghum bicolor</i>	Sorghum
210	<i>Sorghum</i> spp.	Sorghum
212	<i>Spinacia oleracea</i>	Spinach

213	<i>Stevia rebaudiana</i>	Stevia
214	<i>Stylosanthes guianensis</i>	Brasilian lucerne
215	<i>Thymus capitatus</i>	Thyme
216	<i>Thymus vulgaris</i>	Garden thyme
217	<i>Trema orientalis</i>	Charcoal tree
218	<i>Trifolium fragiferum</i>	Strawberry clover
219	<i>Triticum aestivum</i> subsp. <i>aestivum</i>	Bread wheat
220	<i>Triticum aestivum</i> subsp. <i>compactum</i>	Club wheat
221	<i>Vaccinium angustifolium</i>	Lowbush blueberry
222	<i>Vaccinium ashei</i>	Rabbiteye blueberry
223	<i>Vaccinium corymbosum</i>	Highbush blueberry
224	<i>Vaccinium formosum</i>	Swamp highbush, blueberry
225	<i>Vaccinium</i> , sect. <i>cyanococcus</i>	Blueberry
226	<i>Valeriana officinalis</i>	Common valerian
227	<i>Vicia faba</i>	Broad beans
228	<i>Vicia radiata</i>	Mung bean
229	<i>Vigna angularis</i>	Adzuki bean
230	<i>Vigna parkeri</i>	Creeping vigna
231	<i>Vigna unguiculata</i>	Vigna
232	<i>Vitis aestivalis</i>	Grapevine
233	<i>Vitis labrusca</i>	Concord grape; Niagra grape;
234	<i>Vitis rotundifolia</i>	Muscadine grape
235	<i>Vitis rupestris</i>	Grapevine
236	<i>Vitis vinifera</i>	Chancellor grape
237	<i>Vitis vulpina</i>	Grapevine
238	<i>Zea mays</i> subsp. <i>mays</i>	Maize
239	<i>Zingiber officinale</i>	Ginger
240	<i>Ziziphus jujuba</i>	Common jujube

Annex 4: Crops cultivated in the subtropical areas of West Georgia

	Scientific Name	Comon Name
1	Acacia dealbata	Acacia
2	Actinidia chinensis	Kiwifruit
3	Allium ampeloprasum	Leek
4	Allium cepa	Onion
5	Allium sativum	Garlic
6	Apium graveolens	Celery
7	Beta vulgaris	Beet
8	Brassica rapa rapifera	Garden Turnip
9	Camellia sinensis	Tea
10	Capsicum annuum	Chili pepper
11	Cicer arietinum	Chichpea
12	Citrullus lanatus	Watermelon
13	Citrus limon	Lemon
14	Citrus reticulata	Mandarin orange
15	Citrus sinensis	Sweet orange
16	Citrus x paradisi	Grapefruit
17	Coriandrum sativum	Coriander
18	Corylus avellana	European hazel; filbert
19	Corylus columna	Turkish hazel
20	Cucumis melo subsp. melo	Muskmelon
21	Cucumis sativus var. sativus	Cucumber
22	Cucurbita moshata	Pumpkin
23	Cucurbita pepo	Squash
24	Cydonia oblonga	Quince
25	Daucus carota	Carrot
26	Diospiros kaki	Persimmon
27	Echinochloa frumentacea	Barnyard millet
28	Eriobotrya japonica lead	Loquat
29	Eucalyptus spp.	Eucalypt
30	Faba vulgaris	Faba bean
31	Feijoa sellowiana	Feijoa
32	Ficus carica	Fig
33	Glycine max	Soybean
34	Helianthus tuberosus	Topinambur
35	Juglans regia	Walnut
36	Laurocerasus officinalis	Cherry laurel
37	Laurus nobilis	Laurel
38	Lycopersicon lycopersicum	Tomato
39	Malus domestica	Apple
40	Morus rubra	Mulberry
41	Nicotiana tabacum	Tobacco
42	Panicum miliaceum L.	Common millet
43	Petroselinum crispum var. crispum	Parsley
44	Phaseolus vulgaris var. vulgaris	Bean
45	Phyllostachys spp.	Bamboo
46	Pisum sativum	Pea
47	Prunus armeniaca	Apricot
48	Prunus avium	Cherry
49	Prunus cerasus	Sour cherry
50	Prunus domestica	Plum
51	Prunus persica	Peach
52	Pyrus pyrifolia	Pear

53	Raphanus sativus	Radish
54	Setaria italica	Foxtail millet
55	Solanum melongena	Eggplant
56	Solanum tuberosum	Potato
57	Sorghum cernuum Host.	Sorghum
58	Sorghum chinense Jakushev.	Sorghum
59	Sorghum Moench.	Sorghum
60	Sorghum sudanense L. Pers.	Sorghum
61	Spinacia oleracea	Spinach
62	Stevia rebaudiana	Stevia
63	Triticum aestivum	Wheat
64	Vigna unguiculata	Vigna
65	Vitis vinifera	Grape
66	Zea mays	Maize

Annex 5: Leading suppliers of fruits in the European Union

	2002 €mln	2004 €mln	2006 €mln	Leading suppliers in 2006 (share in %)	Share (%)
Total fresh fruits	16,172	17,861	19,330	100%	
				Intra EU: Spain (19%), The Netherlands (9%), Italy (9%), Belgium (7%), France (5%)	59%
				Extra EU ex. DC*: New Zealand (1.9%), Israel (1.2%), USA (0.8%), Australia (0.1%), Canada (0.1%)	4%
				DC*: South Africa (4.7%), Costa Rica (4.4%), Chile (3.6%), Ecuador (3.6%), Colombia (3.2%)	37%
Bananas	3,482	3,688	3,961	20%	
				Intra EU: Belgium (13%), Germany (8%), the Netherlands (6%), France (2.6%), Italy (2.2%)	36%
				Extra EU excl. DC*: -	0%
				DC*: Ecuador (16%), Colombia (15%), Costa Rica (12%), Panama (4.7%), Cameroon (4.4%)	64%
Citrus fruit	3,433	3,887	3,724	19%	
				Intra EU: Spain (48%), the Netherlands (7%), Italy (3.1%), Greece (2.5%), Germany (2.4%)	69%
				Extra EU ex. DC*: Israel (1.9%), USA (1.2%)	3%
				DC*: South Africa (7%), Argentina (4.9%), Turkey (4.3%), Morocco (3.4%), Uruguay (1.7%)	28%
Apples, pears and quinces	2,629	2,909	2,839	15%	
				Intra EU: Italy (17%), the Netherlands (14%), France (14%), Belgium (8%), Spain (4.1%)	67%
				Extra EU ex. DC*: New Zealand (6%), USA (1.3%), Canada (0.2%), Australia (0.2%)	8%
				DC*: Chile (8%), South Africa (7%), Argentina (6%), Brazil (1.5%), China (1.3%)	25%
Berries and other fruits	1,727	1,976	2,160	11%	
				Intra EU: Spain (25%), Belgium (11%), Italy (11%), the Netherlands (11%), France (5%)	72%
				Extra EU ex. DC*: New Zealand (8%), Israel (1.8%), USA (1.4%), Russia (0.2%), Australia (0.1%)	12%
				DC*: Chile (4.9%), Morocco (1.8%), Colombia (1.3%), Madagascar (1.1%), Egypt (1.0%)	16%
Grapes	1,571	1,699	2,019	10%	
				Intra EU: Italy (19%), the Netherlands (13%), Spain (8%), Greece (6%), Belgium (4.4%)	58%
				Extra EU ex. DC*: USA (0.6%), Israel (0.4%), Australia (0.0%), Switzerland (0.0%)	1%
				DC*: South Africa (14%), Chile (12%), Brazil (4.5%), Argentina (2.4%), Egypt (1.9%)	41%
Exotic fruits	1,220	1,416	1,803	9%	
				Intra EU: The Netherlands (12%), France (6%), Spain (6%), Belgium (5%), Germany (3.3%)	36%
				Extra EU ex. DC*: Israel (5%), USA (0.6%), Australia (0.0%), Switzerland (0.0%), Norway (0.0%)	6%
				DC*: Costa Rica (19%), Brazil (6%), Peru (5%), Ivory Coast (3.7%), South Africa (3.4%)	58%
Stone fruits	1,309	1,462	1,776	9%	
				Intra EU: Spain (36%), Italy (19%), France (11%), the Netherlands (3.6%), Germany (3.4%)	82%
				Extra EU ex. DC*: USA (1.0%), Israel (0.4%), Canada (0.3%), Australia (0.2%), Norway (0.0%)	2%
				DCs*: Turkey (7%), Chile (3.9%), South Africa (3.1%), Argentina (1.2%), Morocco (0.4%)	16%

Melons	800	825	1,048	5%	
				Intra EU: Spain (36%), the Netherlands (10%), France (4.8%), Italy (4.6%), Greece (2.7%)	66%
				Extra EU ex. DC*: Israel (1.4%), Russia (0.2%), USA (0.0%), Switzerland (0.0%), Norway (0.0%)	2%
				DCs*: Brazil (14%), Costa Rica (6%), Morocco (4.7%), Panama (2.0%), Honduras (0.7%)	34%

Annex 6: Leading suppliers of vegetables in the European Union

	2002 €mln	2004 €mln	2006 €mln	Leading suppliers in 2006 (share in %)	Share (%)
Total vegetables	9,089	9,352	10,732		100%
				Intra EU: Spain (29%), The Netherlands (27%), France (6%), Italy (6%), Belgium (4.2%)	86%
				Extra EU ex. DC*: Israel (1.7%), New Zealand (0.3%), Russia (0.2%), USA (0.2%), Australia 0.1%)	3%
				DC*: Morocco (3.4%), Kenya (1.6%), Turkey (1.1%), Egypt (0.8%), Peru (0.8%)	11%
Other vegetables	2,932	3,373	3,650		34%
				Intra EU: The Netherlands (27%), Spain (26%), France (5%), Italy (4.9%), Poland (3.5%)	83%
				Extra EU ex. DC*: Israel (3.7%), Russia (0.7%), USA (0.4%), New Zealand (0.0%), Canada (0.0%)	5%
				DC*: Morocco (2.4%), Peru (2.1%), Turkey (1.7%), Thailand (1.2%), Kenya (0.7%)	12%
Tomatoes	2,474	2,207	2,634		25%
				Intra EU: The Netherlands (37%), Spain (33%), Italy (6%), Belgium (5%), France (3.7%)	91%
				Extra EU ex. DC*: Israel (1.1%), Switzerland (0.0%), Russia (0.0%), Norway (0.0%)	1%
				DC*: Morocco (6%), Turkey (1.2%), Senegal (0.2%), Macedonia (0.2%), Syria (0.2%)	8%
Lettuce and chicory	865	880	989		9%
				Intra EU: Spain (45%), the Netherlands (13%), France (11%), Italy (11%), Belgium (6%)	99%
				Extra EU ex. DC*: USA (0.3%), Israel (0.0%), Norway (0.0%), Switzerland (0.0%)	0%
				DC*: Morocco (0.2%), Egypt (0.2%), Chile (0.2%), Tunisia (0.1%), Turkey (0.1%)	1%
Alliaceous vegetables	829	816	969		9%
				Intra EU: The Netherlands (25%), Spain (20%), France (8%), Belgium (7%), Italy (5%)	79%
				Extra EU ex. DC*: New Zealand (3.5%), Australia (1.3%), Israel (1.0%), USA (0.1%),	6%
				DC*: China (4.4%), Argentina (4.0%), Egypt (1.9%), Chile (1.2%), Turkey (0.8%)	15%
Cucumbers and gherkins	661	648	812		8%
				Intra EU: Spain (42%), The Netherlands (38%), Germany (4.6%), Greece (3.7%), Belgium (2.0%)	98%
				Extra EU ex. DC*: Israel (0.1%), Norway (0.0%)	0%
				DC*: Turkey (1.4%), Morocco (0.5%), Macedonia (0.1%), Jordan (0.1%), Ukraine (0.1%)	2%
Brassicas	563	566	673		6%
				Intra EU: Spain (39%), France (15%), the Netherlands (15%), Italy (10%), Germany (8%)	98%
				Extra EU ex. DC*: -	0%
				DC*: Morocco (0.6%), South Africa (0.3%), Macedonia (0.2%), Turkey (0.2%), Kenya (0.2%)	2%
Peas and beans	381	503	563		5%
				Intra EU: The Netherlands (9%), France (9%), Spain (8%), Germany (2.3%), Belgium (1.9%)	33%
				Extra EU ex. DC*: -	0%
				DC*: Kenya (26%), Morocco (21%), Egypt (8%), Senegal (2.6%), Guatemala (2.6%)	67%
Edible roots	384	360	440		4%

			Intra EU: The Netherlands (9%), France (9%), Spain (8%), Germany (2.3%), Belgium (1.9%)	96%	
			Extra EU ex. DC*: -	2%	
			DC*: Kenya (26%), Morocco (21%), Egypt (8%), Senegal (2.6%), Guatemala (2.6%)	2%	

Source: The Fresh Fruit and Vegetable Market in the EU, 2007.

Annex 7: Leading suppliers of cut flowers in the European Union

Product	2002	2004	2006		Leading suppliers in 2006 (share in %)	Share in EU imports
	€ million	€ million	€ million			(%)
Cut flowers and foliage	2,709	2,595	2,597	Intra-EU:	The Netherlands (69), Italy (1), Spain (1), Germany (1), Belgium (1)	76
	118	93	84	Extra-EU excl DC*:	Israel (2)	2
	598	603	84	DC*:	Kenya (9), Colombia (3), Ecuador (3), Zimbabwe (1), Ethiopia (1), Thailand (1), Uganda (1), South Africa (1), Turkey (1), India (1)	22
Rosa	533	560	602	Intra-EU:	The Netherlands (59), Belgium (1)	61
	17	11	4	Extra-EU excl DC*:	Israel (0.4)	0
	291	300	386	DC*:	Kenya (23), Ecuador (6), Uganda (2), Ethiopia (2), Zimbabwe (2), Colombia (2), Zambia (1), Tanzania (1)	39
Dianthus	132	103	93	Intra-EU:	The Netherlands (24), Spain (9), Italy (2)	39
	3	1	0.7	Extra-EU excl DC*:	Israel (0.3)	0
	116	94	145	DC*:	Colombia (36), Kenya (15), Turkey (6), Morocco (1), Ecuador (1), Gaza + Jericho (1)	61
Orchids	58	58	65	Intra-EU:	The Netherlands (69), Germany (2), Belgium (1)	73
	1	0.7	1.5	Extra-EU excl DC*:	New Zealand (1), Taiwan (1)	2
	21	20	23	DC*:	Thailand (22), Malaysia (1), South Africa (1)	26
Gladiolus	8	7	8	Intra-EU:	The Netherlands (81), Italy (3), Poland (2), Spain (2), France (1)	90
	0.05	0.06	0.05	Extra-EU excl DC*:	Israel (0.4)	0
	3	3	0.9	DC*:	Colombia (6), Morocco (2), Kenya (1)	10
Dendranthema	259	245	255	Intra-EU:	The Netherlands (97)	99
	0.8	0.2	0	Extra-EU excl DC*:	-	0
	0.5	2.2	3.6	DC*:	Kenya (1)	1
Other fresh cut flowers	1,535	1,491	1,435	Intra-EU:	The Netherlands (80), Italy (2), Spain (1)	87
	92	76	75	Extra-EU excl DC*:	Israel (4)	5
	129	144	133	DC*:	Kenya (3), Ecuador (2), Colombia (1), South Africa (1)	8

Prepared cut flowers	135	89	95	Intra-EU:	The Netherlands (73), United Kingdom (4), Germany (3)	90
	2	2	2	Extra-EU excl DC*:	Israel (1), Australia (1)	2
	11	8	9	DC*:	India (3), South-Africa (1), Colombia (1), China (1)	8
Dried foliage	10	9	9	Intra-EU:	The Netherlands (10), Germany (8), Spain (4)	33
	1	1	0.8	Extra-EU excl DC*:	USA (2), Australia (1), Israel (1)	4
	14	14	17	DC*:	India (22), China (15), South-Africa (13), Philippines (4), Brazil (3), Turkey (2), Indonesia (1)	63
Other foliage	38	34	35	Intra-EU:	The Netherlands (24), Italy (12), Germany (9)	62
	0.8	0.7	0.5	Extra-EU excl DC*:	Israel (0.2)	0
	13	18	22	DC*:	China (16), India (11), Turkey (4), Philippines (2), South-Africa (2), Thailand (1)	38

Source: The Cut Flowers and Foliage Market in the EU, 2007

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