

# Promoting Sustainable Production and Consumption Patterns: The example of olive oil – INFOIL



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## Standardization of Olive Oil

INFOIL (LIFE08 INF/GR/000581) is a LIFE+ Information and Communication project. The aim of the project is to promote sustainable production and consumption patterns using the example of olive oil aiming at the minimization of the environmental impacts related with olive oil production, especially in regions with very high yield. INFOIL will also promote the importance of life cycle assessment (LCA) during the production and consumption process contributing to the environmental impacts identification and prevention.

### Partners:

- Technical University of Crete Department of Production Engineering and Management
- National Agricultural Research Foundation (NAGREF) - Institute of Olive Tree and Subtropical Plants of Chania (ISPOT), Laboratory of Oliviculture and Postharvest Physiology
- ILEIAKI S.A. - Development Company of Ilea Prefecture (ILEIAKI)
- Musuron Municipality Development Enterprise (MUDE), (Chania)

A key factor regarding the ensurement of consumers on the authenticity and quality of the product is the standardization of olive oil. The extra virgin olive oil is an absolutely natural product, received exactly as it leaves the olive oil mill, without any processing or additives. Branded, standard olive oils undergo strict controls by the competent authorities. These controls are the safeguards for consumers and guarantee the purity of the final product.

Controls are always based on standards set by the European Regulation for Olive Oil and of course by the high standards set by each company.

The standardization requires the appearance on the product of information such as expiry date and details of the standardizer. The packages used are selected based on strict criteria for quality assurance of the product. For this reason, packaging is equipped with a safety cap to prevent fraud.

### Storage Details

During standardization the expiration date is also defined; expiration ranges between 12 and 18 months. During this period, the components of the oil remain intact.

The storage method is very important in order for the olive oil to maintain its flavor, color, aroma and its ingredients. Sunlight, heat, oxygen and moisture can alter the characteristics of the product.



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## Main types of standardized olive oil

Source: Association of Greek Standardization Companies of Olive Oil

Standardized olive oil can be found in four categories: "Extra Virgin Olive Oil", "Virgin Olive Oil", "Olive Oil" made from virgin and refined olive oil and "Olive Pomace Oil". There are also other types of olive oil, more or less treated, such as green olive oil, organic olive oil, aromatic olive oil, etc.

### **EXTRA VIRGIN OLIVE OIL**

The most natural category of olive oil with excellent aroma and flavor. Its acidity does not exceed 0.8%. It has a strong fruity flavor and aroma of freshly cut olives. Its unique taste brings out the freshness of salads and it can be ideally combined with special dishes such as roast meat and vegetables find their ultimate match.

### **VIRGIN OLIVE OIL**

Natural olive oil with nice aroma and flavor, whose acidity is around 2%.

### **OLIVE OIL MADE FROM REFINED AND VIRGIN OILS**

It is a mixture of virgin and refined oil. It has a pleasant flavor and aroma, with a distinctive scent of ripe fruit and fresh olive, light yellow color and acidity that does not exceed 1%.

### **OLIVE POMACE OIL**

Oil obtained by blending refined olive-pomace oil and virgin olive oil (except olive oil lampante category), whose acidity does not exceed 1% and its characteristics are in accordance with those laid down for this category. The production of oil from the kernel of the olive and its refinement is made under very strict controlled procedures in order to ensure the high quality of the final product. Olive pomace oil has a soft, mild flavor. Is ideal for frying because it can withstand high temperatures.

### **GREEN OLIVE OIL – THE FIRST OIL OF EACH PRODUCTION YEAR**

The extra virgin olive oil of the first unripe fruit of the olive, has a rich, fruity, pungent flavor and a characteristic bitter taste. It is usually available in limited quantity and is collected from the best olives. Unripe olives, gathered by hand and not by beating or falling. Green olive oil, rich in antioxidants combines superior taste with high biological value.

### **ORGANIC OLIVE OIL**

It is olive oil produced by olive trees in which the organic farming principles are applied. No fertilizers or sprays, nor any kind of treatment for the pressing of the olives, the preservation and bottling of olive oil is used. On the label of organic products, the number of approval and certification of a recognized inspection body must appear (such as DHO, BIO-HELLAS, FYSIOLOGIKI).

*For more information about the project please visit:*

[www.infoil.tuc.gr](http://www.infoil.tuc.gr)

## Comparative Report of olive oil markets

Spain is the largest olive oil producer at European and global level, who managed to double its production after 1990, following policies designed by low-cost production, earned a prominent place in the international market. Thus, world prices of olive oil determined by the values of the markets of Spain, Italy and finally of Greece. Spain seeks ways to promote its products in some emerging markets or in countries such as West Africa and Chile and in the areas of catering, gourmet products, distribution chains in major food and hotel businesses.

Italy has a decreasing but still high quality and production of olive oil. The aim is to improve the quality of olive oil and further to conquest American and Chinese market.

Greece occupies after Spain and Italy the third place in worldwide production of olive oil and has more than 140 million olive trees who produce approximately 360,000 tons of olive oil annually, where 75-80% is extra virgin olive oil. **This rate makes Greece the largest producer of extra virgin olive oil and offers a reasonably useful comparative advantage (Italy has the second place with a rate of 40-45% and Spain has the third place with 25-30% share of annual production in virgin olive oil).**

Below is a comparative confrontation of five countries whose markets constitute olive oil import terminals.

OLIVE-OIL EXPORTING COUNTRIES	OLIVE OIL MARKETS (quantities in tonnes)				
	GERMANY	RUSSIA	UN. KINGDOM	D.R. CHINA	FRANCE
SPAIN	2006 4.438,5 2007 5.563,4 2008 4.042,5	2007 11.315 2008 10.848 2009 8.825	2005 24.334,6 2006 25.682,2 2007 27.176,8	2009 4974,2	2006 131 2007 164 2008 156
ITALY	2006 38.064,3 2007 42.171,3 2008 37.871,3	2007 3.483 2008 3.879 2009 3.623	2005 20.415,8 2006 16.709,4 2007 17.145,7	2009 3103,2	2006 140 2007 640 2008 752
GREECE	2006 4.555,8 2007 6.513,4 2008 5.075,2	2007 725 2008 592 2009 696	2005 3.039,3 2006 2.673,7 2007 3.443,9	2009 419,5	2006 119 2007 61 2008 42



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## Desertification

Desertification is considered today as a major threat of land degradation in Mediterranean countries. More than one third of Greece is at a high risk of desertification or already desertified. Desertification as a natural process depends on many factors (physical, environmental, human) that act alone or interact with each other. The main process of desertification is soil erosion, which is most likely in degraded hilly areas. Erosion result in drastic reduction in the depth of the soil and thus the available water for plant growth, fertility and productivity of soil and vegetation. Also other important processes of desertification is the salinization of soils observed especially in low-lying coastal areas is accompanied by over-exploitation and degradation of groundwater. Desertification in addition to the severe effects of the natural environment, adversely affects the economy and society in a region, after degrading natural resources, reduces the productivity of a site and thus farmers' incomes, leading to population movements in other areas with more features employment.

Depending on the intensity of action of the processes of desertification, soil degradation can be reversible, meaning that will be able to recover if one or more of the desertification processes eliminated, or if irreversible degradation is very high (reducing soil depth greater than a critical value ). Protection of natural resources, an area of desertification requires detailed study and inventory of all the factors that cause and taking any necessary technical and institutional measures for the rational management and protection.

Source: Desertification– Problems and Measures  
Konstantinos Kosmas, Agricultural University of Athens



*For more information visit the portal:*

[www.infoil.gr](http://www.infoil.gr)