

## Introduction to Olive Oil Production Olive Oil Processing Course

California, USA – October 2014



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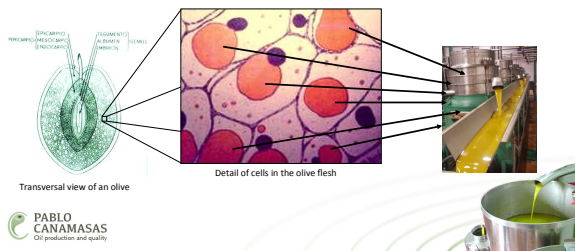
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## What is olive oil?

Olive oil is the oil obtained solely from the fruit of the olive tree (*Olea europaea* L.), to the exclusion of oils obtained using solvents or re-esterification processes and of any mixture with oils of other kinds.



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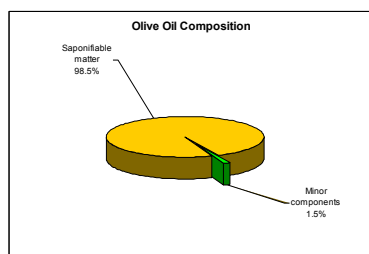
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## What is olive oil?



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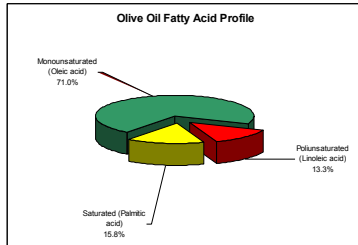
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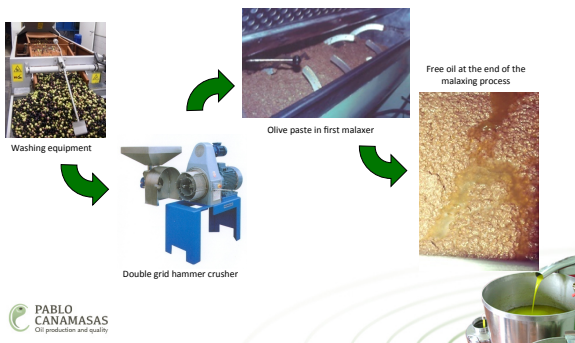
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## What is olive oil?



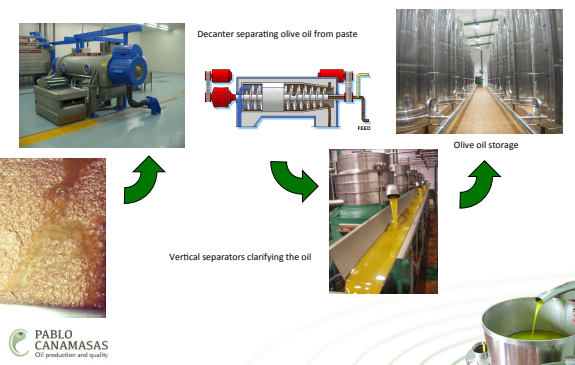
PABLO  
CANAMASAS  
Oil production and quality

## How is olive oil made?



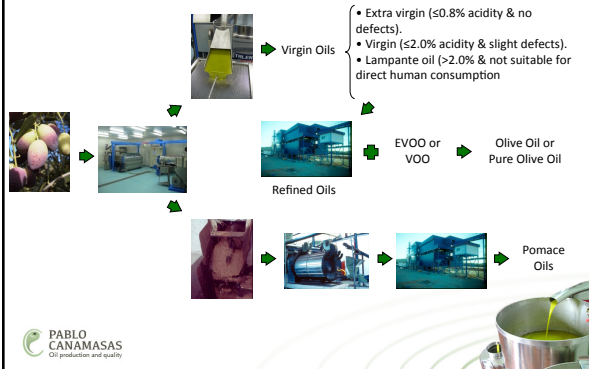
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## How is olive oil made?



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## Are all olive oils the same?




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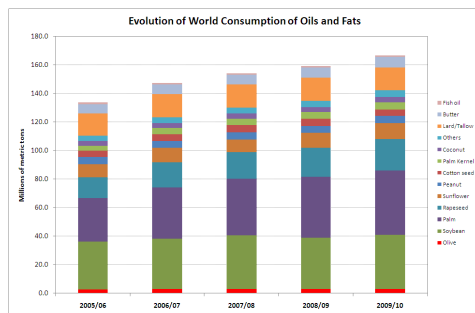
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## Olive Oil in the Oils and Fats Trade




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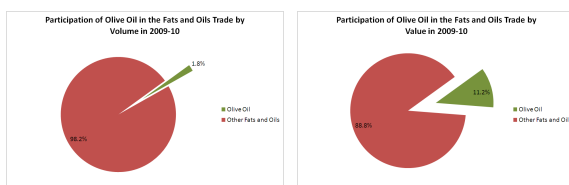
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## Olive Oil in the Oils and Fats Trade




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# Olive Oil in the Oils and Fats Trade

Why does olive oil outperform other fats and oils by value?

- Health attributes, particularly Extra Virgin (EVOO).
- High production costs (limited mechanisation & low yields).
- Availability (limited olive growing areas in the world).
- Romantic perception of Mediterranean lifestyle.
- Flavour.



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# Health Attributes

- High Oleic acid content
- High mono/polyunsaturated fatty acid ratio
- Low content of saturated fat
- Polyphenols (antioxidants)
- Tocopherols (pro-vitamin E)
- Natural, not refined!!
- Research studies prove the beneficial impact in fighting heart disease colon and skin cancer, and other health issues



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# Limited Mechanisation



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## Low average World Yields

Great variability in production

Country	Yields (% of world)	Yields (gallons/acre)
Spain	38.6%	51.61
Italy	22.8%	51.65
Greece	13.6%	42.87
Turkey	4.3%	23.31
Tunisia	6.2%	12.71
BBL (Boort in 2013)	0.3%	294.1
Average		34.1

Source: IOC/FAO/BBL




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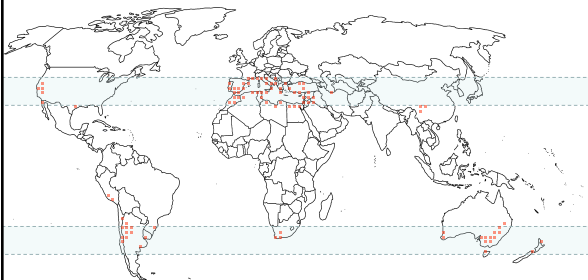
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## Limited Distribution of Olive Growing Areas




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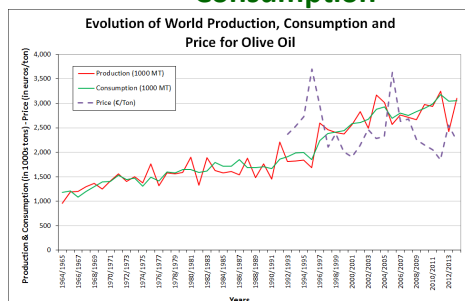
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## World Production and Consumption



Sources: International Olive Council. 2010; EC Report on Olive Oil. 2008; and Modern Olives.




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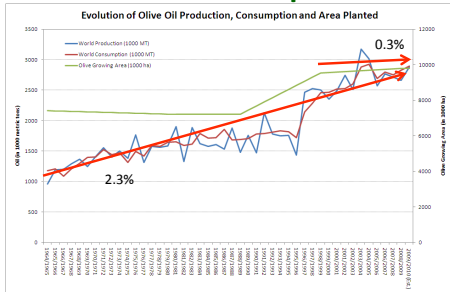
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## World Production and Consumption



## World Production and Consumption

### Analysis of consumption growing trends

Parameter	2009/10	2020/21	Annual Growth	2020/21	Vs. 2009/10
Consumption (x 1M Lb)	6,489	8,332	2.30%	8,332	-1,843
Population (x 1M)	6,869	7,756	1.11%	7,327	-837
Consumption per capita (Lbs/person/year)	0.92	1.05	1.18%		

•The world would require between 3,310,000 and 7,286,000 acres of average yields to cover the increasing demand.

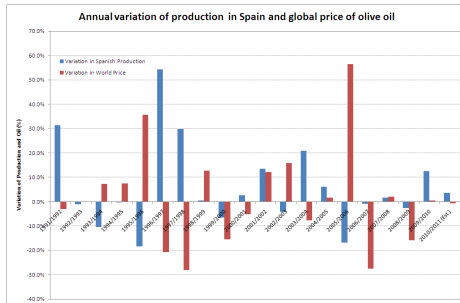
•At current planting rates, world area under olives will grow only up to 815,100 acres.

## Olive Oil Trade

### Why does olive oil price, particularly EVOO, remains relatively low?

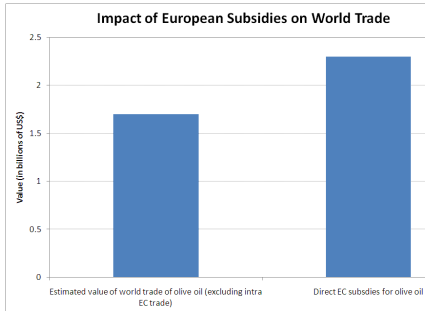
- Heavily subsidised industry.
- High concentration of demand and very atomised offer.
- Lack of financial resources amongst suppliers.
- Mislabelling and adulteration.

## Olive oil price & Spanish production variation



Sources: IOC, Modern Olives, others.

## Olive Oil Subsidies



## Changes in the European subsidy policy by 2013 could see oil price jumping as much as AU\$ 1.00/litre

### Known facts regarding new European Agricultural Policy in 2013

- Subsidies did not disappear.
- Money allocated to agricultural subsidies was 12% lower in real terms.
- The EC will divide subsidies in several lots: A first basic payment on a per hectare basis; a second payment subject to the grower adhering to certain horticultural practices; a payment in the hands and discretion of the member countries and a final payment targeted to help disadvantaged groves.
- Although the final formula for subsidy allocation is extremely complex and not clearly understood, most analysts coincide that the net amount of subsidies for olive oil has been cut back between 10 and 30%.
- No grower can receive more than a 30% cut in subsidies.
- Large Spanish growers are proportionally worse off when compared with smaller Greek or Italian olive producers.
- Andalusia alone will receive € 400M less in combined subsidies.

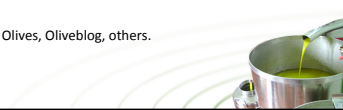
Sources: EC bulletins, Modern Olives, Oliveblog, others.

## Changes in the European subsidy policy by 2013 could see oil price jumping as much as AU\$ 1.00/litre

### Known facts regarding new European Agricultural Policy in 2013

- Best current estimates indicate that the subsidies for an average Spanish grower (€371/ha or €0.77/litre) will drop to €300/ha or its equivalent of €0.62/litre.
- Those € 300/ha would be calculated as follows:
  - A basic payment to support agriculture of around 50% (€ 150/ha).
  - An additional help for following environmentally friendly practices of around 20% (€ 60/ha).
  - An additional voluntary payment at the discretion of the Spanish government to support certain strategic activities of around 10% (€ 30/ha).
  - A component related to productivity, employment, etc., which is region and industry specific of around 20% (€ 60/ha).
- Policy will be reviewed again in 2020.

Sources: EC bulletins, Modern Olives, Oliveblog, others.




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## Concentration of demand and atomised offer

- 70 to 75% of the world's bottled olive oil is sold by 6 companies (SOS Cuétara (Bertolli, Carbonell, Carapelli, Koipe); Sovena Group (East Coast Olive Oil, Agribética, ALCO); Ybarra Group (Ybarra, MiGaSa, Heinz); Aceites del Sur (CooSur, La Española); Hojiblanca (+Cargill); and Borges.
- There is a declared amount of approximately 2.5M growers in Europe at an average of 5.2 acres per grower.
- There are close to 11,000 declared processing plants in Europe at an average of just 430,000 Lbs of oil/processing plant.




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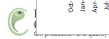
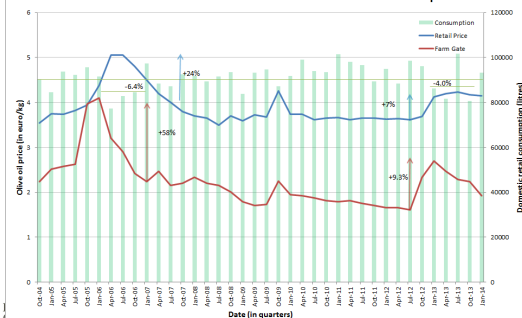
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## Concentration of demand and atomised offer

Evolution of Farm Gate and Retail Prices and Sales for EVOO in Spain




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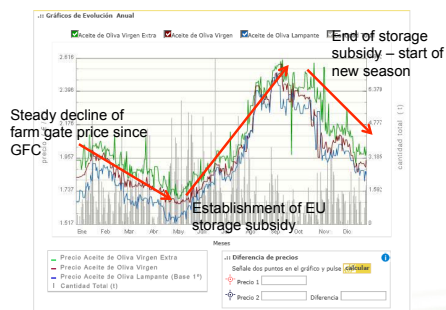
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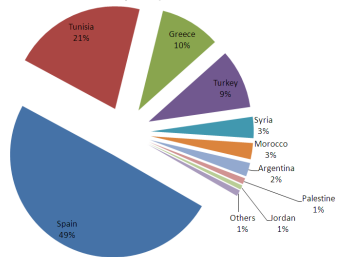


## Access to Finance (2009 example)



## The “real” olive industry

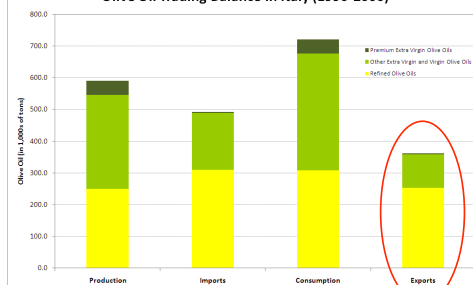
World olive oil composition - Net balance (Production - Consumption)



Source: IOC/FAO

## The “real” olive industry

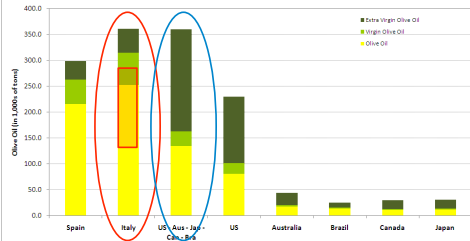
Olive Oil Trading Balance in Italy (1990-2006)



Source: IOC & ISMEA

## The “real” olive industry

Comparison between oil grades exported from Italy and Spain with oil grades imported by US, Australia, Japan, Brazil and Canada

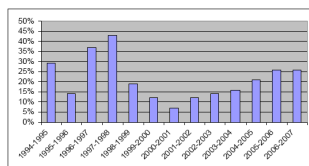


Source: IOC; ISMEA; El Cultivo del Olivo; Caiani & co.



## Adulterations - Canada

# of samples found to not comply with IOC standard

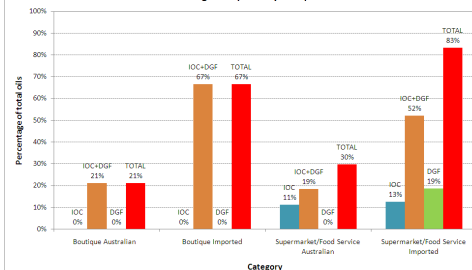


Sources: Surveillance and Analysis of Olive oil in Canada, Angela Sheridan, 2008



## Adulterations - Australia

Proportion of oils not complying with IOC or DGF rules in the different categories (January 2009)




Sources: RIRDC report on New Testing Methods for Olive Oil 2009.



## Adulterations - USA

**THE NEW YORKER**

LETTER FROM ITALY  
**SLIPPERY BUSINESS**  
The trade in adulterated olive oil.  
by Tom Mueller  
AUGUST 13, 2007




"Food is so redesigned that few groves can make as honest living," one expert says.

**Report**

Tests indicate that imported "extra virgin" olive oil often falls international and USDA standards

Franklin, C. H.; Shallen, G. L.; Grossman, C. E.; Wang, L. C.; Pappas, J. D.



July 2010

Robert Mondavi Institute for Wine and Food Science  
University of California, Davis

Sources: UC Davis Report, 2010 & Slippery Business by Tom Mueller, 2007.

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Oil production and quality

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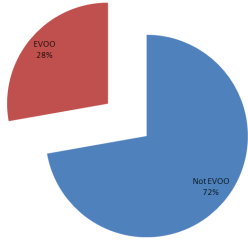
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## Adulterations - China

Proportion of adulterated/mislabelled EV Olive Oils in the Chinese market (2006-2010)



Sources: Modern Olives, 2006-2010.

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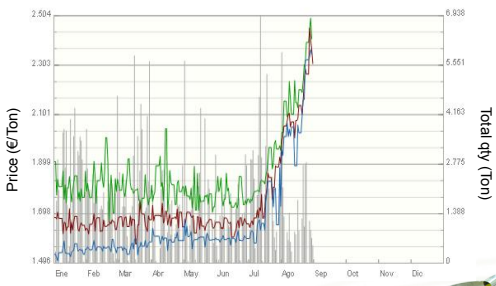
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## What is happening right now?



[www.poolred.com](http://www.poolred.com)

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What is happening right now?

POTENTIAL EVOLUTION OF OLIVE OIL STOCK IN SPAIN

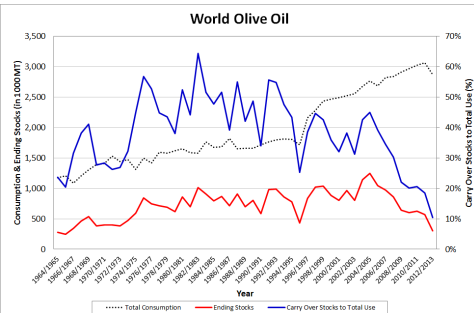
Month	800			900			1000		
	Stock in Hand Scenario 1	Trade Balance Scenario 1	Production Scenario 1	Stock in Hand Scenario 2	Trade Balance Scenario 2	Production Scenario 2	Stock in Hand Scenario 3	Trade Balance Scenario 3	Production Scenario 3
Jul-14	741.5	-132.9		741.5	-132.9		741.5	-132.9	
Aug-14	608.6	-132.9		608.6	-132.9		608.6	-132.9	
Sep-14	475.6	-132.9		475.6	-132.9		475.6	-132.9	
Oct-14	342.7	-132.9	8.0	342.7	-132.9	8.0	342.7	-132.9	10.0
Nov-14	217.8	-84.2	80.0	218.8	-108.6	90.0	218.8	-132.9	100.0
Dec-14	213.6	-84.2	264.0	200.2	-108.6	297.0	186.9	-132.9	330.0
Jan-15	393.4	-84.2	272.0	388.7	-108.6	306.0	383.9	-132.9	340.0
Feb-15	581.3	-84.2	112.0	586.1	-108.6	126.0	591.0	-132.9	140.0
Mar-15	609.1	-84.2	56.0	603.6	-108.6	63.0	598.1	-132.9	70.0
Apr-15	580.9	-84.2	8.0	558.0	-108.6	9.0	535.1	-132.9	10.0
May-15	504.8	-84.2		458.5	-108.6		412.2	-132.9	
Jun-15	420.6	-84.2		349.9	-108.6		279.3	-132.9	
Jul-15	336.4	-84.2		243.4	-108.6		146.3	-132.9	
Aug-15	252.3	-84.2		132.8	-108.6		13.4	-132.9	
Sep-15	188.1	-84.2		24.3	-108.6		-119.5	-132.9	
Oct-15	83.9	-84.2	12.0	-84.1	-108.6	13.0	-252.5	-132.9	14.0

Sources: AAO & Modern Olives.



Oil production and quality

What is happening right now?



Sources: AAO & Modern Olives.



Oil production and quality