

1. GENERAL DESCRIPTION OF OLIVE GROWING IN FRANCE



Figure 1. Localization of France
(Source: UN)

1.1. Introduction

In economic terms, France has just over 5.1 million olive trees spread over 55 000 ha (2011) and 13 *départements*, located solely in the South-east. They cover less than 0.18% of the usable agricultural area (UAA).

The average density is 86 trees/ha although this can vary from one region to another (from 50 in Corsica to 110 in Languedoc-Roussillon).

Over 15 000 ha, i.e. more than one-quarter of France's olive orchards are irrigated. However, here again there are variations, ranging from 9% in the Ardèche to 34% in Bouches-du-Rhône.

The olive tree is emblematic of Provence where 75% of growers are not professional farmers.

Olive growing and the products of the olive tree are at the centre of many cultural phenomena. Orders of Knights swear to defend the olive tree as a symbol of peace, countless events showcase the olive tree and its products, and numerous museums, tourist routes and other initiatives have grown up around the olive. (Source: IOC questionnaire)

1.2. Socio-economic indicators

- Area: 551 500 sq km (UN, 2008)
- Capital city: Paris (UN)
- Currency: Euro (EUR) (UN, 2009)
- Population: 62 616 488 (World Bank, 2009)
- Urban population: 78% (World Bank, 2010)
- Rural population: 22% (World Bank, 2010)
- Population growth rate: 0.4% (UN, 2005/10)
- Life expectancy: 78.6 years (men), 85.1 years (women) (UN, 2010/15)
- Main exports by quantity: wheat (FAOSTAT, 2009)
- Main imports by quantity: soybean cake (FAOSTAT, 2009)
- GNI per capita, PPP (current international \$): 34 440 (World Bank, 2010)
- GDP per capita, PPP (current international \$): 33 820 (World Bank, 2010)
- Employment in agriculture: 2.9% (World Bank, 2008)
- Employees in agriculture, female: 2% (World Bank, 2008)
- Employees in agriculture, male: 4% (World Bank, 2008)

2. BACKGROUND DATA

2.1. Olive oils

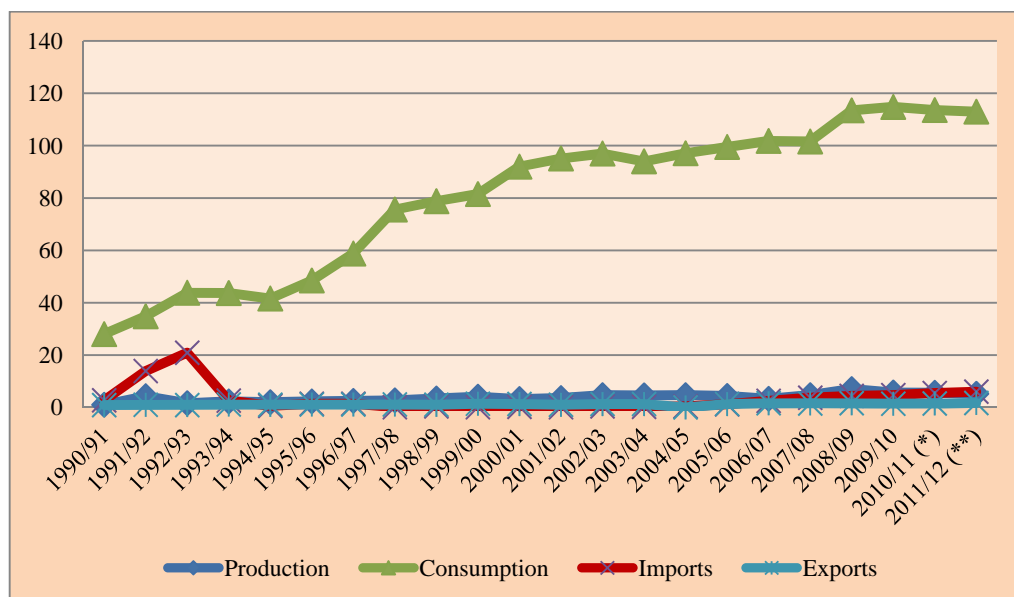


Figure 2. Olive oil production, consumption, imports and exports 1990–2012 (1 000 tonnes)

* Estimates

** Forecasts (Source: IOC)

Table 1. Olive oils (1 000 tonnes) (Source: <http://www.internationaloliveoil.org/estaticos/view/131-world-olive-oil-figures>)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Production	3.2	3.6	4.7	4.6	4.7	4.4	3.3	4.7	7.0	5.7
Consumption	92.0	95.1	97.0	94.0	97.1	99.5	101.8	101.6	113.5	114.8
Imports	0.2	0.1	0.4	0.2	0.4	1.2	2.5	3.7	4.4	4.7
Exports	1.3	1.0	1.3	1.3	0.0	1.3	1.6	1.5	1.6	1.4

2.2. Table olives

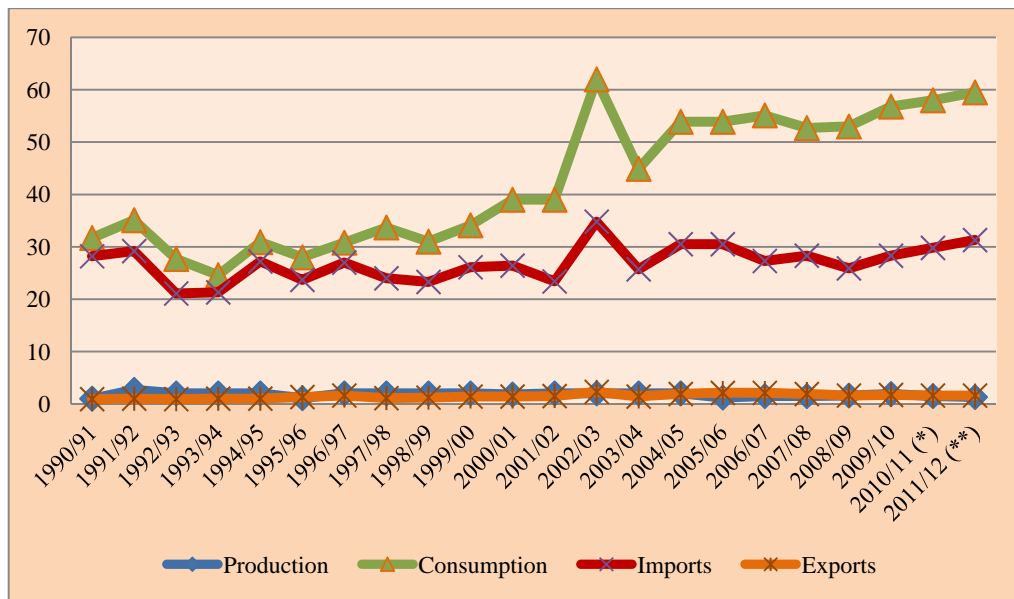


Figure 3. Table olive production, consumption, imports and exports 1990–2012 (1 000 tonnes)

* Estimates

** Forecasts (Source: IOC)

Table 2. Table olives (1 000 tonnes) (Source: <http://www.internationaloliveoil.org/estaticos/view/132-world-table-olive-figures>)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Production	1.8	2.0	2.0	2.0	2.0	1.2	1.5	1.5	1.6	1.9
Consumption	39.0	39.0	62.0	44.9	53.9	53.9	55.1	52.7	53.0	56.8
Imports	26.4	23.4	34.8	25.7	30.5	30.5	27.3	28.3	25.9	28.3
Exports	1.4	1.5	2.3	1.4	1.9	2.1	2.1	1.9	1.6	1.7

2.3. Total area planted

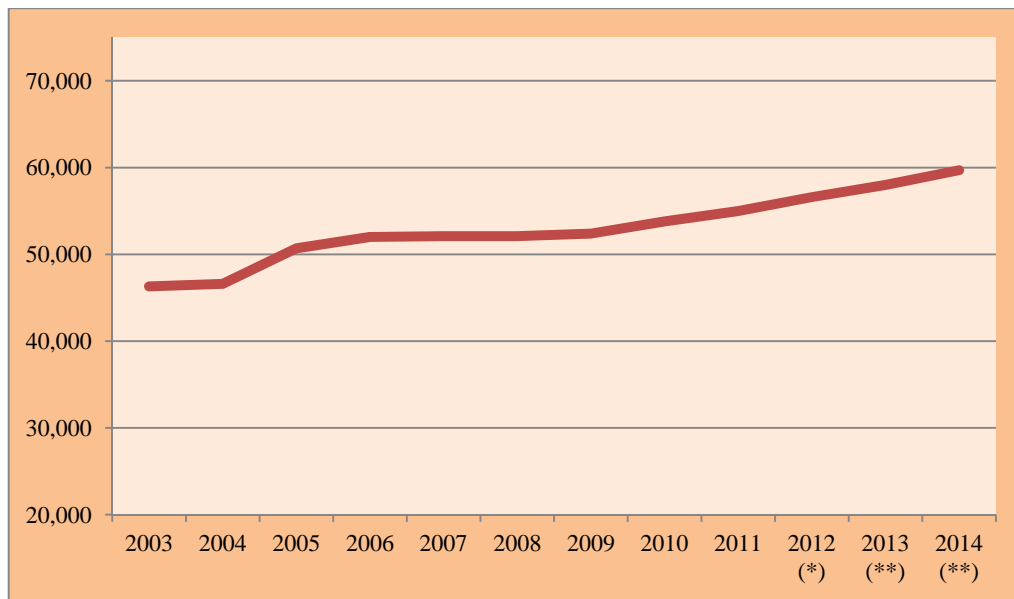


Figure 4. Changes in area planted with olive trees (ha)

* Estimates

** Forecasts (Source: IOC)

3. OLIVE INDUSTRY IN FRANCE

3.1. *Historical background*

In the nineteenth century, olive growing in France suffered significant decline for two reasons:

- French colonial policy led to the establishment and development of olive growing in North Africa from 1820. Because crop production was much higher per hectare in these areas, the olive oil and olives produced there competed price-wise with French product;
- When phylloxera ravaged French vineyards in 1870, farmers had to establish young vines on new or disease-free plots of ground. To do so, they uprooted many olive trees to convert to vine cultivation.

In the last twenty years or so, France has seen a surge of fresh economic interest in olive growing. This has been due to the establishment of new olive orchards with the encouragement of grants and subsidies from the French government and to the impact of EU promotion to increase consumption of olive oil by educating consumers about its matchless gastronomic and health-promoting properties.

3.2. *Orchard resources*

In 2009, the base year used for the IOC questionnaire, France had 52 400 ha of olive trees. By 2012, this figure was estimated to be 56 600 ha and it is expected to continue moving upwards to around 59 700 ha by 2014.

Taking 2009 again as the benchmark, conventional (non-organic) olive orchards were farmed on 43 004 ha of all the olive crop area in France. Seventy-five percent of these orchards (32 254 ha) were rainfed and 25% (10 750 ha) were irrigated.

Olives were cultivated on 29 423 agricultural holdings, of which 24 866 (84.5% of the total) were less than two hectares in size; 2 912 between 2 and 5 ha; 921 between 5 and 10 ha; 424 between 11 and 20 ha; 201 between 21 and 50 ha, and 99 with more than 50 ha.

When itemised by age, France's olive orchards fall into three categories:

- Young orchards (< 5 years old): 2 100 ha (4%);
- Orchards at full bearing (5–50 years old): 16 700 ha (32%);
- Old orchards (> 50 years old): 33 600 ha (64%).

(Source: IOC questionnaire)

3.3. *Location*

France produces olives and olive oil on a small scale. For reasons of latitude and climate, olive growing is limited to the Mediterranean part of the country where it is found in four regions in the South of France: Provence-Alpes-Côte d'Azur, Languedoc-Roussillon, Rhône-Alpes and Corsica.

(Source: IOC).

Provence-Alpes-Côte d'Azur

This is by far the region with the largest proportion of France's olive orchards (69%) where the focus is on olive oil production.

The varieties grown are highly adapted to each producing area. For instance, the 'Cailletier' is grown in the Alpes-Maritimes. In the Var region, where olive growing extends from coastal to mountain areas, several varieties can be found: 'Brun' in the Toulon area; 'Cayon' in the south; 'Bouteillan' to the north, in the Aups area; the 'Cayet' and 'Ribier' clones to the east and 'Aglandau' and 'Cayanne' to the west.

In the Alpes-de-Haute-Provence and Vaucluse *départements*, 'Aglandau' accounts for 98% of the varieties grown.

Lastly, the 'Grossane', 'Salonenque', 'Aglandau' and 'Picholine' varieties are cultivated in the Bouches-du-Rhône.

This region has widely embarked on a registered designation of origin scheme (*appellation d'origine contrôlée* – AOC) for its olives, oils and tapenades. To date, four geographical indications are in place.

Languedoc-Roussillon

Nineteen percent of France's olive growing area is concentrated in this region. At the outset, it was mainly dedicated to the production of two main varieties of table olive: 'Picholine du Languedoc' and 'Lucques'.

The 'Picholine' is the olive of the Nîmes area and the Gard *département*, although with time it has spilled over to the areas of Hérault, Aude and Pyrénées-Orientales. It is harvested in October to make green olives as well as olive oil.

The 'Lucques' variety is grown mainly in the Béziers area and the Minervois region of Aude. It is rated highly because of its thin skin and crisp flesh.

Rhône-Alpes

The two olive growing *départements* in this region – Ardèche and Drôme – are very different in terms of climate and cultivation system.

In the Ardèche, olive cultivation is located in the southern part of the *département* and the orchards are farmed intensively. 'Picholine' and 'Rougette' are the two principal varieties. The oil produced has a green fruity taste.

In the southern Drôme, olive orchards are located in the Nyons and Baronnies areas where olives are cultivated in association with vines. The 'Tanche' is the main variety in the area and is used chiefly for black olives.

Corsica

The olive is grown across the island in four distinct areas:

- Balagne/Nebbio;
- Central and eastern plain;
- Dotta/Bonifacio/Muratello;
- Ajaccio.

Traditionally, two varieties predominate: 'Sabine' in the North and 'Germaine' in the South.

Since 1960, olive trees have been established in the eastern part of the island, chiefly the ‘Picholine’ variety, which has also been planted in the Balagne area.

Olive orchards have been established on the eastern plain after drainage of marshland and clearance of agricultural land where vine, citrus and olive cultivation complement each other. All these new orchards are irrigated.

‘Picholine’ is a dual-purpose variety; however, due to the latitude of the island, it is used primarily for olive oil production in Corsica.

3.4. Varieties

The main varieties are described as follows:

Aglandau

This hardy variety has a medium rooting ability and an intermediate start of bearing. The time of flowering is also intermediate and it is self compatible. Its productivity is medium and alternate. It gives top-quality oil with excellent keeping properties.

It tends to alternate bearing although this can be controlled through suitable pruning. Its oil content is medium and it is clingstone.

It is resistant to verticillium wilt and moderately resistant to olive leaf spot, but sensitive to olive scale. It is also resistant to cold and drought.

Bouteillan

This variety is hardy. It requires light but frequent pruning. It has an early start of bearing and its productivity is high and constant. It is cultivated mainly in irrigated areas. It grows very quickly and gives a high oil yield. Its time of ripening is intermediate. The fruit may vary considerably in size and it is clingstone.

It shows good resistance to cold, but is sensitive to attacks from olive fly, olive scale and olive moth. It is moderately resistant to olive leaf spot and drought.

Grossane

This variety is hardy and has a medium-to-low rooting ability. Owing to the difficulty in rooting it is propagated by grafting. It has an intermediate start of bearing but, when irrigated, it starts to give crops earlier.

It has an intermediate time of flowering and ripening, a medium pistil abortion rate and a medium pollen production rate. Its productivity is medium and constant. Freestone, it is used primarily for making sweet-tasting black olives. It gives a low yield (16%) of oil, which is very fragrant but does not keep well.

It is resistant to cold, drought and verticillium wilt and moderately resistant to olive leaf spot. It is sensitive to olive scale, olive moth and olive fruit fly.

Lucques

This variety is not very hardy and is sensitive to cold. It is very demanding as regards soil characteristics and cultural practices, particularly irrigation.

It has an intermediate start of bearing while flowering is very early. It is andro-sterile and has a medium pistil abortion rate. Its productivity is medium and alternate. Harvesting is early.

The fruit is a good size and appreciated for its organoleptic characteristics. It has a low oil yield. Freestone, it is used exclusively for making green olives and it is sensitive to processing

It is sensitive to olive scale, olive fly and verticillium wilt, whereas it is moderately resistant to olive leaf spot.

Picholine Languedoc

This variety is hardy and has the ability to adapt to different environments although it is quite demanding as regards certain cultural practices. It is the main French variety. It has a medium rooting ability.

It comes into bearing early. When irrigated, productivity is high and constant. Its time of flowering is intermediate and the pollen has a high germination capacity. Ripening is late.

It is used primarily for making green table olives. It gives top-quality oil, although it is difficult to extract. It gives a medium oil yield and it is freestone.

It is resistant to olive leaf spot and moderately tolerant of verticillium wilt, cold and drought.

Salonenque

This variety is very hardy and adapts to the poorest soils although it does respond well to cultural care. Its rooting ability is low and it has an intermediate start of bearing. It flowers early and the fruit ripens late. It is self-incompatible and it has a low pistil abortion rate. Its productivity is high and constant.

The fruit is harvested mid-season when it has not yet fully changed colour. It gives a medium-to-high oil yield. Freestone, it is cultivated primarily for making split green olives.

It is resistant to verticillium wilt and moderately resistant to cold and drought but sensitive to the Mistral. It is also resistant to olive leaf spot and shows little sensitivity to attacks from the olive fly.

Tanche

This variety is not very hardy and requires suitable cultural care and loose soils. It comes into bearing late while its time of flowering is intermediate. It is partially self-incompatible and it has a high pistil abortion rate. The 'Cayon' and 'Rougeon' varieties are used for pollination purposes. Its productivity is medium and alternate.

It ripens late and harvesting is done in one run. Freestone, the fruit is unevenly sized but highly rated for black table olives and for its high yield of top-quality oil. Both the oil and the olives are covered by the 'Nyons' registered designation of origin. It is moderately resistant to cold and drought but shows little tolerance of wind. It shows little resistance to verticillium wilt and it is sensitive to olive leaf spot and olive fly.

(Source: World Catalogue of Olive Varieties, IOC)

3.5. Olive oil: production and yield

In 2009/10, France produced 5 700 t of olive oil; 250 t of this volume was estimated to be organic. Although this share is small, the number of olive farms converting to organic growing is rising sharply and organic production is therefore expected to double within five years.

Looking at the figures in Table 2, the 2008/09 season stands out with production topping at 7 000 t due to the favourable weather conditions (rainfall and temperatures).

Comparison of the mean data for olive oil production in France (see Table 3) shows that production has jumped by 75.19% between the two decades, going up from an average of 2 620 t/year to 4 590 t/year.

Strikingly, crop yields differ considerably in conventional and organic olive orchards. According to the figures released for 2009/10, yields are much lower in organic groves (320 kg olives/ha) than in non-organic groves (1 000 kg olives /ha).

Cultural practices and harvesting can be partially mechanised on 44 540 ha (85%) and fully mechanised on only 1 310 ha (2.5%). No mechanisation is possible on the remaining 6 550 ha (12.5%).

3.6. Olive oil: processing sector

In all, there were 254 olive oil mills in France in 2009, with an average production capacity of 21 t/year, and 650 olive oil packing plants.

Olive oil mills in France are small to medium in size. They are often family businesses and have no more than 1–3 staff involved in production. Mills can be of two types: private mills and olive oil cooperatives.

(Source: IOC questionnaire)

3.7. Olive oil: marketing, domestic consumption and foreign trade

There are two categories of mill in France: mills that extract olive oil to order and those that both extract and market the oil. The pricing policies practised by the two types therefore differ.

Over the last decade, French consumption of olive oil has risen from 92 000 t in 2000/01 to almost 115 000 t in 2009/10 (Table 1). However, regional consumption patterns are very different. Thus, the South-East is by far the leading consumer of olive oil, ahead of the Paris region and the Central-East. In contrast, the North, East and South-West remain low consumers. Per capita consumption of olive oil amounted to 1.66 kg in 2010.

Review of the averages for the latest two decades (Table 3) shows that olive oil consumption averaged 100 640 t/year in 2000/01–2009/10 and showed an increase between the first and second halves of the decade when the mean worked out at 95 040 t/year and 106 240 t/year, respectively. In short, performance through 2000/01–2009/10 confirms the expansion of olive oil consumption in France.

Table 3. OLIVE OIL (Source: IOC)

	Average (t) 1990/91–1999/00	Average (t) 2000/01–2009/10	Change (%)
Production	2 620	4 590	75.19
Consumption	53 510	100 640	88.07
Imports*	4 410	1 780	-59.63
Exports*	1 060	1 230	16.03

*Disregarding intra-EU trade.

France does little foreign trade in olive oil. Its imports decreased sharply (-59.63%) between the two decades reported in Table 3, falling from 4 410 t to 1 780 t. France also exports olive oil on a small scale, exporting an average of 1 230 t/year in the 2000s.

According to the latest EUROSTAT data available (2010), inside the EU, Belgium is the main destination of French exports, purchasing 2 304 t of olive oil, followed by Italy, which took 1 856 t. In the same year, Spain was the main source of French imports of olive oil (84 387 t), with Italy lying next (28 832 t).

(Source: IOC questionnaire)

3.8. Table olive subsector

There are two main varieties for table olives: ‘Picholine’, used primarily for processing green olives and ‘Tanche’ for making black olives.

In 2009, there were 70 table olive processing plants in France with the capacity to handle 500 kg–1 t/year, and the same number of table olive packing plants.

Taking the usual benchmark season of 2009/10, France produced a total of 1 858 t of table olives, broken down as follows:

- Conventional growing:
 - 71% green table olives (1 310 t);
 - 9% black table olives (175 t).
- Geographical indications:
 - 7% green table olives (139 t);
 - 13% black table olives (234 t).

Looking at the main economic variables for this subsector in terms of the averages for the past two decades, it should be noted that mean yearly production has decreased slightly from 1 880 t to 1 750 t, translating into a drop of 6.91%.

In contrast, table olive consumption has climbed by 65.89% between the two decades, going up from a yearly average of 30 760 t to 51 030 t. Per capita consumption of table olives came to 0.80 kg/inhabitant in 2010. Consequently, imports have risen by 11.94 % between the two decades reported in the table below.

Table 4. TABLE OLIVES (Source: IOC)

	Average (t) 1990/91–1999/00	Average (t) 2000/01–2009/10	Change (%)
Production	1 880	1 750	-6.91
Consumption	30 760	51 030	65.89
Imports*	25 110	28 110	11.94
Exports*	1 140	1 790	57.02

*Disregarding intra-EU trade.

3.9. Recent measures

There are currently several forms of aid and subsidies in place in France for the olive industry:

- Aid for agri-environmental measures to convert olive orchards to organic growing: This is a flat-rate amount of €900/ha paid for five years under certain conditions. Regions apply different ceilings for the amount of aid receivable:
 - Corsica: € 000/year/farm
 - Languedoc-Roussillon: € 000/year/farm
 - Provence-Alpes-Côte d'Azur: €10 000/year/farm
 - Rhône-Alpes: €15 200/year/farm
- Aid to support organic farming (conversion and maintenance): Since 2010, aid is granted (€90/ha) under certain conditions to support the maintenance of organic farming.
- The Agriculture Act of 5 January 2006 introduced a tax credit for farmers under certain conditions.
- With the implementation of Measure 132 in the French Rural Development Programme, regional authorities may defray certification fees when certain eligibility conditions are fulfilled. Payment arrangements vary according to the region concerned.

4. SOURCES

IOC questionnaire

IOC database

<http://www.internationaloliveoil.org/estaticos/view/130-survey-and-assessment-division>

United Nations

<http://data.un.org/Default.aspx>

World Bank

<http://data.worldbank.org/country>

FAOSTAT

<http://faostat.fao.org/site/342/default.aspx>

EUROSTAT

http://epp.eurostat.ec.europa.eu/portal/page/portal/international_trade/data/database