1. GENERAL DESCRIPTION OF OLIVE GROWING IN PORTUGAL

1.1. Introduction

Figure 1. Location of Portugal (Source: UN)

The olive tree has become a constant feature of Portuguese agriculture thanks to its resistance to drought and its adaptability to rocky ground.

In the thirteenth century, olive oil already had an important place in Portugal's foreign trade, and it continued to hold this position subsequently. Olive oil was in fact very abundant in the Middle Ages.

In later centuries when they played a significant role in revitalising agriculture, religious orders were to focus their attention on olive oil production.

The "sacred oil" played a fundamental part in the economy of the Convent of the Holy Cross in Coimbra, the Monastery of Alcobaça, the Order of Christ, the Order of the Temple and the Order of the Knights of Our Lord Jesus Christ.

(Source: CASA DO AZEITE)

1.2. Socio-economic indicators

- **Area: 92 090 sq km (UN, 2008)**
- **Capital city: Lisbon (UN)**
- **Currency: Euro (EUR) (UN, 2009)**
- **Population: 10 642 841 (World Bank, 2010)**
- **Urban population: 60.7% (UN, 2010)**
- **Rural population: 39.3% (UN, 2010)**
- **Population growth rate: 0.1% (UN, 2010/15)**
- **Life expectancy: 76.1 years (men), 82.6 years (women) (UN, 2010/15)**
- **Main exports by quantity: sugar refined, wine and cow milk, whole, fresh (FAOSTAT, 2009)**
- **Main imports by quantity: wheat and maize (FAOSTAT, 2009)**
- **GNI per capita, PPP (current international $): 24 760 (World Bank, 2010)**
- **GDP per capita, PPP (current international $): 25 610 (World Bank, 2010)**
- **Employment in agriculture: 11.2 % (World Bank, 2009)**
- **Employees in agriculture, female: 12% (World Bank, 2009)**
- **Employees in agriculture, male: 11% (World Bank, 2009)**

2. BACKGROUND DATA

2.1. Olive oils

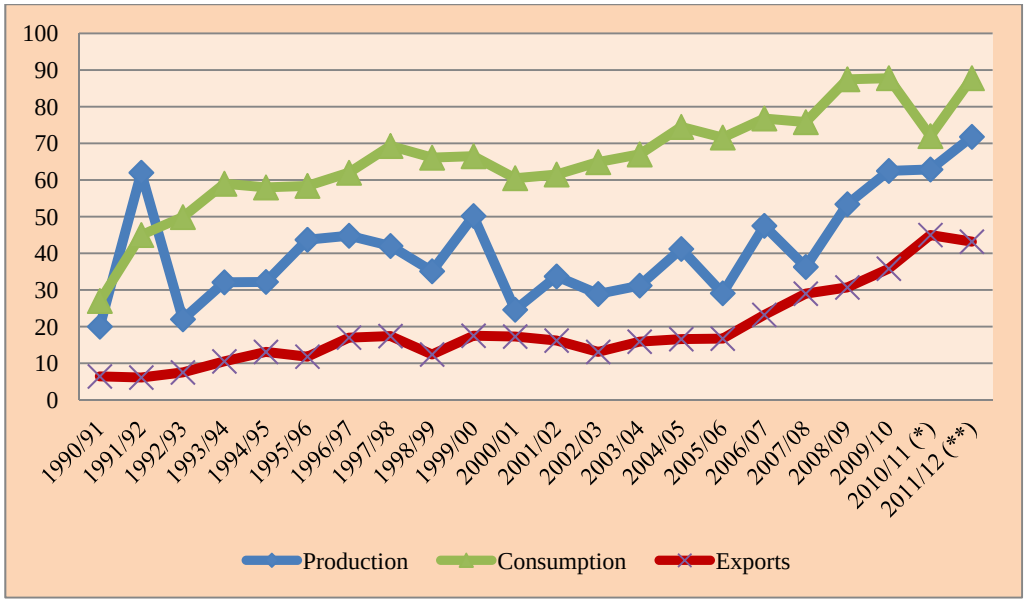

Figure 2. Olive oil production, consumption and exports 1990–2012 (1 000 tonnes)
* Estimates
** Forecasts (Source: IOC)

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	24.6	33.7	28.9	31.2	41.2	29.1	47.5	36.3	53.4	62.5
Consumption	60.5	61.5	64.9	67.0	74.5	71.6	76.8	75.8	87.5	87.8
Exports	17.3	16.2	13.1	15.9	16.6	16.7	23.2	29.0	30.7	35.8

2.2. Table olives

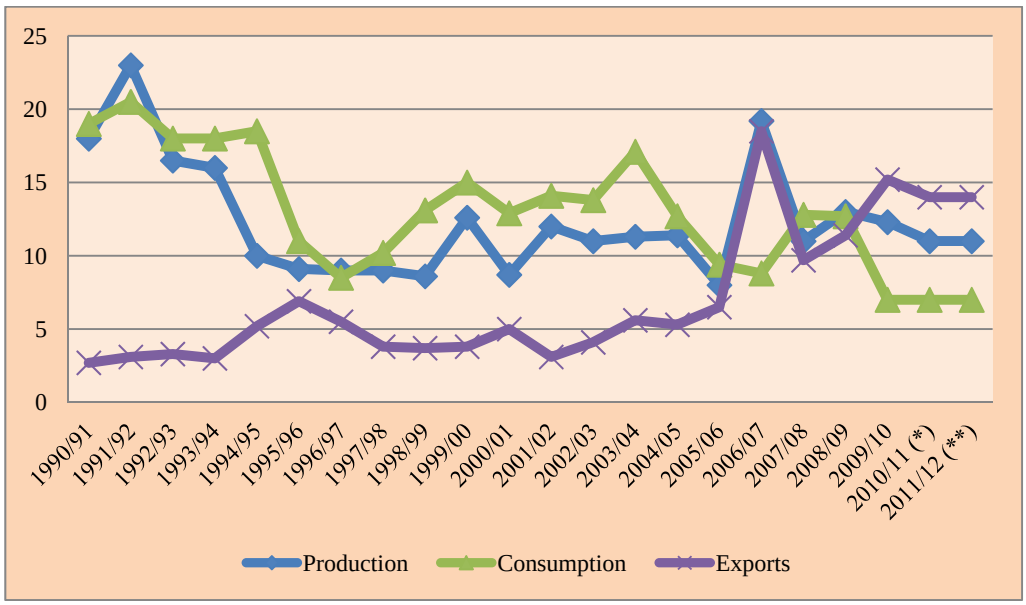

Figure 3. Table olive production, consumption and exports 1990–2012 (1 000 tonnes)
* Estimates
** Forecasts (Source: IOC)

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	8.7	12.0	11.0	11.3	11.4	8.0	19.2	11.0	13.0	12.3
Consumption	12.9	14.1	13.8	17.1	12.7	9.4	8.8	12.8	12.7	7.0
Exports	5.0	3.1	4.1	5.6	5.3	6.5	18.5	9.7	11.4	15.2

2.3. Total area planted

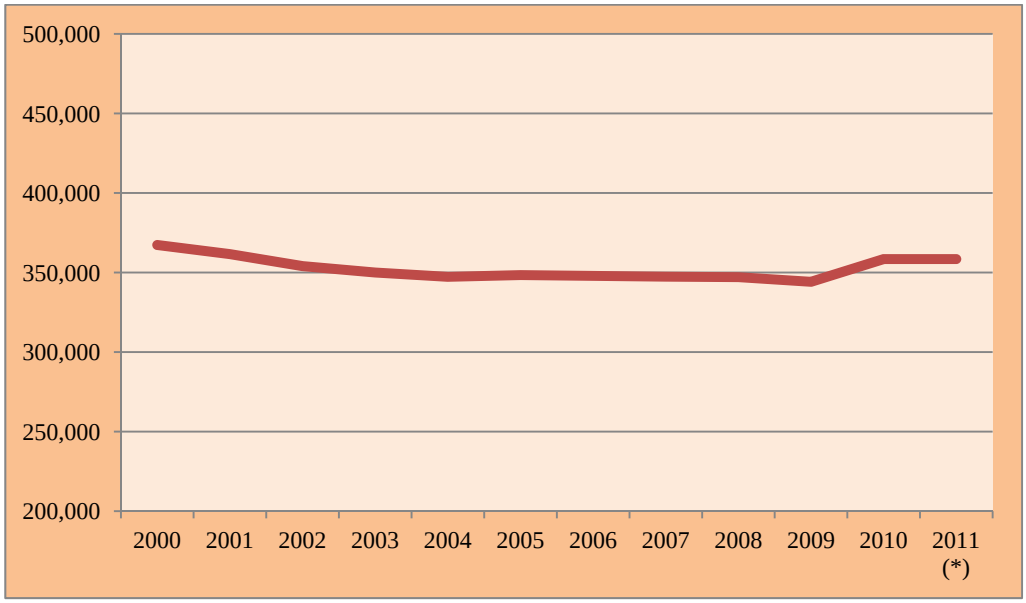

Figure 4. Changes in area planted with olive trees (ha)

* Estimates (Source: IOC)

3. OLIVE INDUSTRY IN PORTUGAL

3.1. Orchard resources

In the 2009/10 crop year, olives trees were grown on 344 199 ha in Portugal, of which 7 633 ha were for table olives and 336 566 ha for olive oil.

Although the number of olive farms decreased between 1999 and 2009, olive crop area has not changed significantly (+0.2%) and is mainly for olive oil production (99%). This is largely due to the considerable expansion of olive growing in the Alentejo (+19%, = +26 000 ha) and Tras-Os-Montes (+4% = 3 000 ha) regions. The Alentejo is the top olive producing region in Portugal with a 49% share of total olive acreage, followed by Tras-Os-Montes (22%) and Beira Interior (14%).

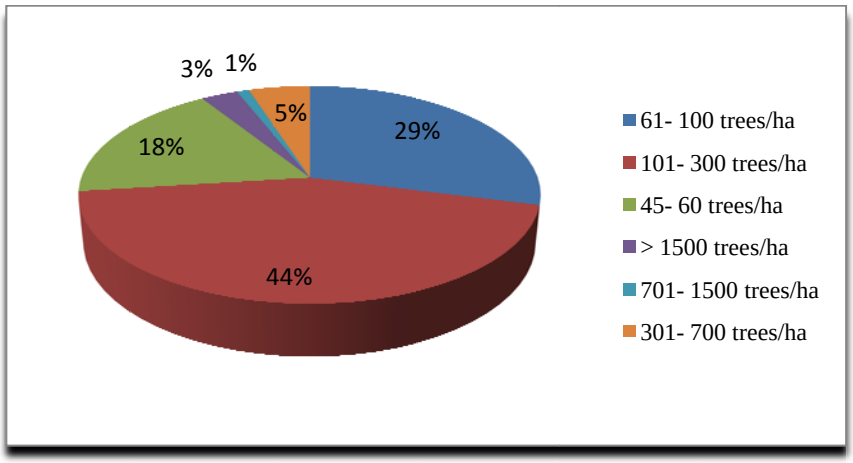

Figure 5. Orchard density breakdown of olive growing area (2009) (Source: Structure of olive sector – 2012)

Almost 40% of olive acreage is concentrated in just over 2 000 farms with an average size of more than 20 ha (the only farm size category to have increased in the last decade). This reflects the dynamism and level of technology and management of this sector, which benefits from the economies of scale and maximised efficiency of input use afforded by larger farms.

(Source: Structure of olive sector – 2012).

If we look at the pie chart in Figure 5, we see the percentage breakdown of olive growing area by orchard density (trees/ha): 44% has a density between 101 and 300 trees/ ha; 29% has a density between 61 and 100 trees/ ha; 18% has 45–60 trees/ha; 5% has 301-700 trees/ha; 3% has more than 1 500 trees; and lastly 1% has between 701 and 1 500 trees. The same density data are itemised by region in Table 3, below.

Table 3. Olive orchard density by region (2009) (Source: Structure of olive sector – 2012)

	45–60 trees/ha	61–100 trees/ha	101–300 trees/ha	301–700 trees/ha	701–1500 trees/ha	> 1500 trees/ha
Portugal	57673	96435	146588	17051	2812	11190
Entre-Douro-e-Minho	385	180	313	0	0	0
Trás-Os-Montes	4822	14513	51627	1321	188	550
Beira Litoral	3158	4557	5390	106	88	31
Beira Interior	8244	20037	16827	1506	108	370
Riajeo e Oeste	9248	7941	6560	1263	258	209
Alentejo	24679	48545	65559	1757	2169	10525
Algarve	7137	662	311	99	1	0

3.2. Location

There are five main olive growing regions: Trás-Os-Montes, Beira Litoral, Beira Interior, Riatejo e Oeste and Alentejo. In 2010, Alentejo produced 51% of Portugal's olive oil and 54% of its table olives. Coming up next was Trás-Os-Montes with 27% and 25%, respectively.

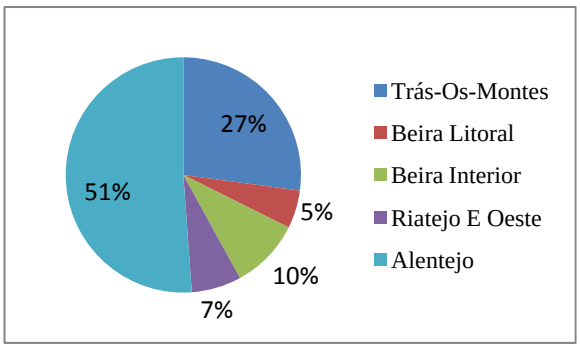

Figure 6. Olive oil production by region (t) (Source: Structure of olive sector – 2012)

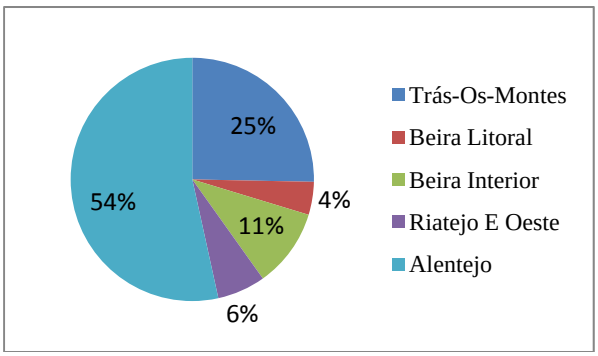

Figure 7. Table olive production (t) by region (Source: Structure of olive sector – 2012)

So, the Alentejo is Portugal's leading producing region. It is divided, in turn, into three areas: Norte Alentejano, Alentejo Interior and Moura.

Geographically speaking, olive production in the Norte Alentejano (location of olive orchards, olive oil mills and packing plants) is restricted to the municipalities of Alter do Chão, Arronches, Avis, Borba, Campo Maior, Castelo de Vide, Crato, Estremoz, Elvas, Fronteira, Marvão, Monforte, Redondo, Portalegre, Sousel, Vila Viçosa, Alandroal, Nisa and Reguengos de Monsaraz; the parishes of Nossa Senhora de Machede, São Mansos, São Vincente do Pigeiro, São Miguel de Machede and São Bento do Mato in the municipality of Évora; and the parishes of Luz and Mourão in the municipality of Mourão.

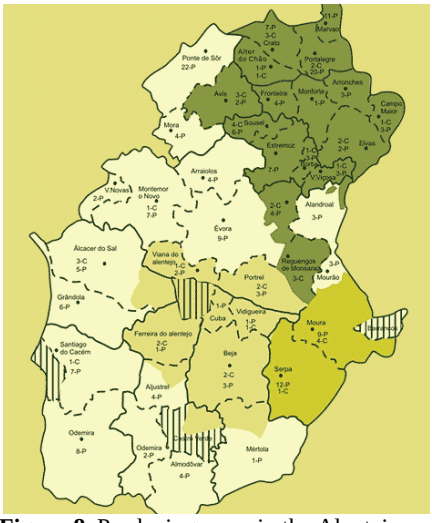

Figure 8. Producing areas in the Alentejo region (Source: CEPAAL)

In the Alentejo Interior, the producing area is naturally limited to the whole districts of Portel, Vidigueira, Cuba, Alvito, Viana do Alentejo, Ferreira do Alentejo and Beja, as well as to the parishes of Aljustrel, S. João de Negrilhos and Ervidel in the municipality of Aljustrel, Entradas in the municipality of Castro Verde, Alcaria Ruiva in Mértola and Torrão in the municipality of Alcácer do Sal.

In the third and last area, Moura, production is located geographically in the parishes of Amareleja, Póvoa de S. Miguel, S. João Baptista, S. Agostinho, S. Amador, Safara, S. Aleixo da Restauração and Sobral da Adiça, in the municipality of Moura; the parishes of Pias, Vale de Vargo, Vila Verde de Ficalho, Brinches, S. Maria, Salvador and Vila Nova de S. Bento, in the municipality of Serpa; and the parish of Granja, in the municipality of Mourão.

(Source: CEPAAL)

3.3. Varieties

Carrasquenha

This variety adapts to different types of soils and to drought but is sensitive to excessive moisture.

Owing to its poor rooting ability it is propagated by grafting.

It has an intermediate start of bearing. Its time of flowering is also intermediate and it is considered partially self-compatible. Its time of ripening is intermediate and its fruit removal force is high. Productivity is high and alternate.

It gives a medium-to-high yield of good quality oil and is also used for green pickling. It is considered susceptible to olive knot.

Cobrançosa

This variety is appreciated for its tolerance of cold and lime-induced chlorosis, but is considered susceptible to drought and salinity. It has a medium rooting ability.

It has an intermediate start of bearing. Its time of flowering is also intermediate and it is self-compatible. Its productivity is high and constant. Its time of fruit ripening is intermediate. The fruit has a low removal force, although natural fruit drop is low, which facilitates mechanical harvesting. It has a medium oil content.

It is considered susceptible to olive knot and olive anthracnose.

Cordovil de Castelo Branco

This variety is of medium hardiness and shows some tolerance of cold, drought and salinity. It is propagated well by truncheons and leafy stem cuttings.

It has an intermediate start of bearing. Its time of flowering is also intermediate and it is considered self-compatible. Its productivity is medium-to-high and constant. Its time of ripening is intermediate and the fruit shows some resistance to removal; none the less, it is suited to mechanical harvesting.

It gives a good yield of quality oil. The fruit is also considered suitable for table olives. It is considered susceptible to olive knot.

Cordovil de Serpa

This hardy variety is fairly tolerant of calcareous soils but sensitive to cold, drought and salinity. It has a medium rooting ability. It comes into bearing early, and its time of flowering is intermediate. It is considered to be self-compatible and to have a high pistil abortion rate.

Its productivity is high and alternate. Its time of ripening is intermediate and the fruit shows some resistance to removal, which disappears when it is fully mature. It has a medium oil yield. When used for oil production it is rated highly for the quality of its oil, which has a high content of oleic acid. It is freestone and is also prized for green pickling. It is considered very susceptible to olive knot but resistant to olive fly.

Galega Vulgar

This variety is appreciated for its drought-tolerance. It is sensitive to cold, salinity and calcareous soils.

Its rooting ability can range from medium to low since it is difficult to root when mist-propagated as a leafy stem cutting and it is considered good rootstock for other varieties.

It comes into bearing early. Its time of flowering is intermediate and it is considered self-compatible. Its productivity is high and alternate. The fruit ripens early. It has a high removal force, which hinders mechanical harvesting. It is intended primarily for oil production although it gives a low yield of oil. Freestone, it is also rated highly for table olives. It is resistant to verticillium wilt but susceptible to olive knot, olive anthracnose and olive fly.

Maçanilha Algarvia

This variety is considered hardy because it tolerates cold, drought and salinity. It has a medium rooting ability and an intermediate start of bearing. It is considered self-compatible and tends to have low pistil abortion rates. Its productivity is medium and alternate. The time of ripening is intermediate and the olives have a low removal force, which facilitates mechanical harvesting.

It is used for oil production because of its high oil yield, and for production as green olives or olives turning colour because of the size and quality of its fruit; it is clingstone. It is considered susceptible to olive fly, olive anthracnose and olive knot.

Redondal

This variety is susceptible to cold, drought and salinity. It has a medium rooting ability.

It comes into bearing late. Its time of flowering is intermediate and it is considered self-compatible. Its productivity is low and constant. Its time of ripening is intermediate and the fruit has a medium removal force. It is used for oil production because of its good oil yield and because of the quality of the oil, which is rich in oleic acid. It is rated highly for table olive production because of size of the fruit; it is freestone.

It is considered sensitive to olive knot and olive anthracnose.

(Source: World Catalogue of Olive Varieties, IOC)

3.4. Olive oil: production and yield

Viewed in terms of ten-year averages, olive oil production in Portugal has held quite steady in the last two decades, averaging 38 840 t/crop year during 2000/01–2009/10 and 38 410 t/crop year in 1990/91–1999/00 (Table 4). Analysis of the season-by-season production figures provided in Table 1 reveals a low in 2000/01, when Portugal produced 24 600 t of olive oil, after which production gradually recovered, albeit with some fluctuations, reaching a high of 62 500 t in 2009/10.

According to figures released by the National Statistics Institute of Portugal, the yield in oil-olive orchards was 1 232 kg/ha in 2009/10 (Source: INE 2009/10).

3.5. Olive oil: domestic consumption and foreign trade

During the ten seasons between 2000/01 and 2009/10, Portugal consumed an average 72 790 t of olive oil per year (see Table 4).

Portugal does little foreign trade in olive oil, although exports have climbed steeply by 79.20% from 11 970 t to 21 450 t over the last two decades. Spain was the main EU destination for Portuguese olive oil in 2010 when it purchased 13 105 t. Italy was its second best customer, buying 3 143 t of Portuguese oil. In the same year (2010) Portugal imported 74 938 t of olive oil from Spain. (Source: EUROSTAT).

Table 4. OLIVE OIL (Source: IOC)

	Average (t) 1990/91–1999/00	Average (t) 2000/01–2009/10	Change (%)
Production	38 410	38 840	1.11
Consumption	56 120	72 790	29.70
Exports*	11 970	21 450	79.20

*Disregarding intra-EU trade

3.6. Table olives

According to the figures in Table 5 below, table olive production in Portugal dropped by -10.54% between the two ten-year periods reported, going from an average of 13 180 t/year in 1990/91–1999/00 to 11 790 t in 2000/01–2009/10.

Figures released by the National Statistics Institute of Portugal (INE, 2009/10) assess yields at 186 kg /ha in table olive orchards.

Domestic consumption has moved in the same direction, decreasing by -20.09% from an average of 15 180 t/year to 12 130 t between the two decades.

In contrast, Portuguese exports of table olives have recorded quite spectacular growth (+105.85%) over the two decades, rising from 4 100 t to 8 440 t on average.

Table 5.TABLE OLIVES (Source: IOC)

	Average (t) 1990/91–1999/00	Average (t) 2000/01–2009/10	Change (%)
Production	13 180	11 790	-10.54
Consumption	15 180	12 130	-20.09
Exports*	4 100	8 440	105.85

*Disregarding intra-EU trade

3.7. Future measures

Under Regulation (EC) No 1782/2003 two kinds of support are implemented to help the olive sector in Portugal. Both have a direct impact. The first aims to improve the quality of agricultural products while the second is meant to protect Portugal's national olive heritage by supporting traditional olive growing areas.

Support for quality improvement (0.67 million euros).

Support for the protection of national olive heritage (5.65 million euros):

This support is meant to help maintain bearing olive orchards over the age of 30, planted at densities of 60–240 trees/ha and located in traditional olive growing areas. Support is in the form of an additional, hectare-linked payment:

(i) Between 0.3 and less than 5 ha: €150/ha

(ii) Between 5 and less than 10 ha: €120/ha

(iii) More than 10 ha: €85/ha

4. SOURCES

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

CASA DO AZEITE

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