

## 1. GENERAL DESCRIPTION OF OLIVE GROWING IN TUNISIA

### 1.1 Introduction



**Figure 1.** Location of Tunisia  
(Source: UN)

Tunisia is one of the countries where the olive sector has changed the most. Tunisian olive orchards account for 20% of world olive acreage and with a share of 6%, Tunisia holds an important place in the world production ranking. In addition, the olive sector as a whole represented 15% of Tunisia's final agricultural production in 2010. Olive growing is a major agricultural activity and its socio-economic development is crucial for Tunisia because it helps to curb rural depopulation and migration to the cities.

Tunisia is the leading producer and exporter of olive oil in the southern Mediterranean, after the European Union. Olive oil is its leading agricultural export and makes up 50% of all its exports. Olive cultivation provides 50 million working days a year. It plays a key role in regional development and social stability and is often a factor of demographic stability in areas where the environment is so harsh that any other activity is doomed to failure.

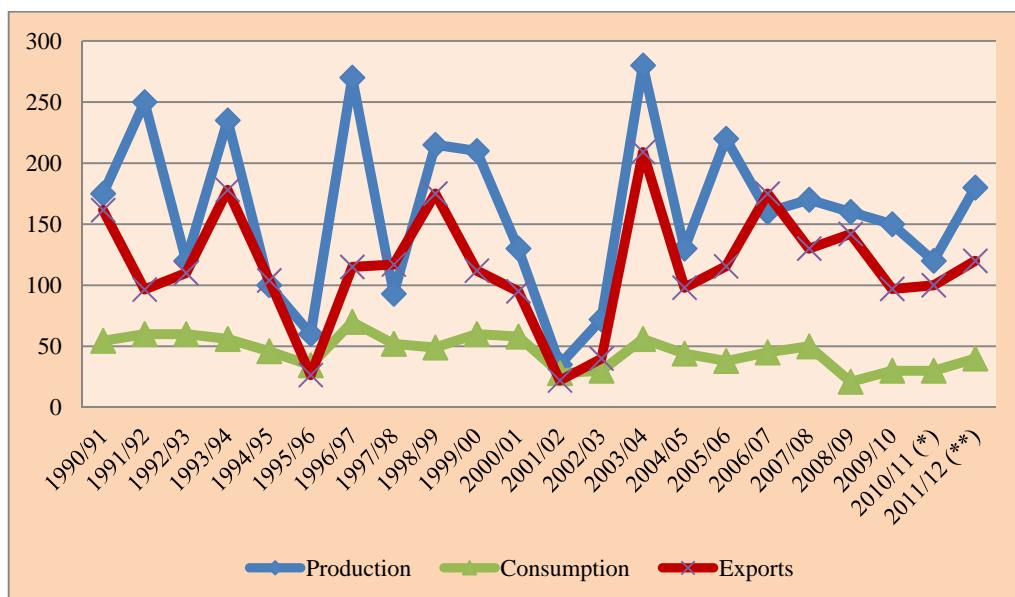
The environmental role of the olive tree is just as important since it helps to reduce the erosion of fragile soils and to limit desertification.

#### 1.1. Socio-economic indicators

- Area: 163 610 sq km (UN, 2008)
- Capital city: Tunis (UN)
- Currency: Tunisian Dinar (TND) (UN, 2008)
- Population: 10 432 500 (World Bank, 2009)
- Rural population: 33% (World Bank, 2010)
- Urban population: 67% (World Bank, 2010)
- Population growth rate: 1.0% (UN, 2005/10)
- Life expectancy: 76.0 years (women), 71.9 years (men) (UN, 2005/10)
- Main exports by quantity (tonnes): virgin olive oil and oilseed cake (FAOSTAT, 09)
- Main imports by quantity (tonnes): wheat and maize (FAOSTAT, 2009)
- GNI per capita, PPP (current international \$): 8 130 (World Bank, 2010)
- GDP per capita, PPP (current international \$): 8 524 (World Bank, 2010)
- Employment in agriculture: 25.8% (World Bank, 2008)
- Employees in agriculture, female: 23% (World Bank, 2008)
- Employees in agriculture, male: 27% (World Bank, 2008)
- Employment in olive growing: 50 000 000 work days (IOC, 2009/10)

## 2. BACKGROUND DATA

### 2.1. Olive oils



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

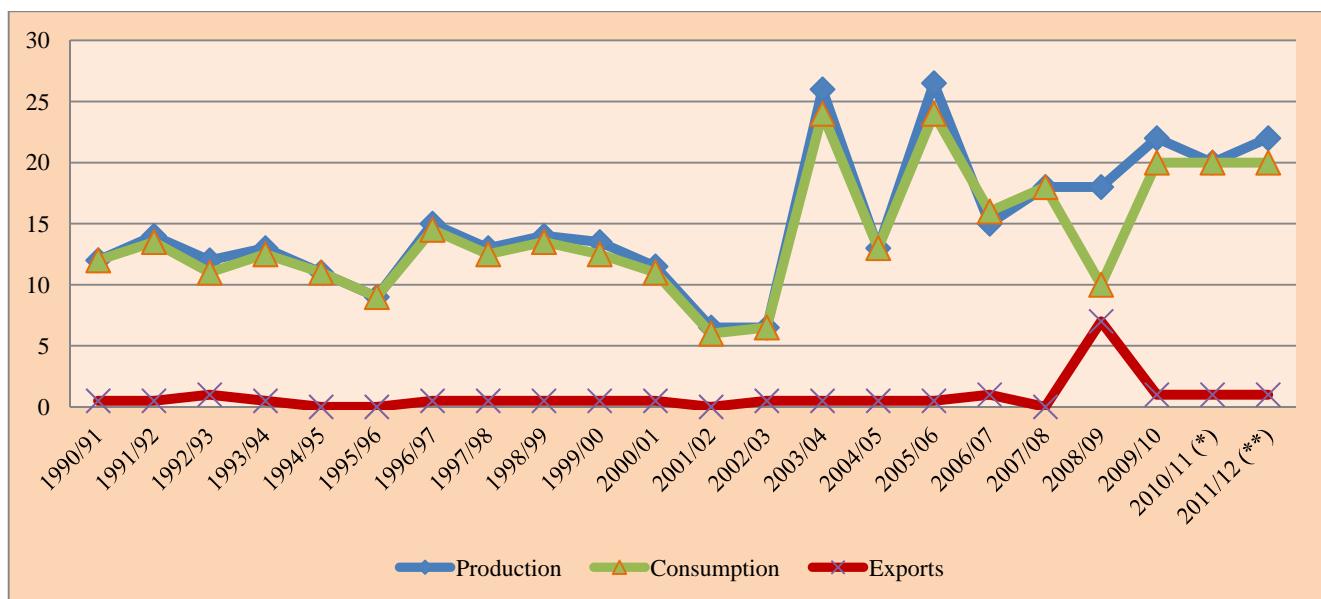
\* Estimates

\*\* 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
<b>Production</b>	130	35	72	280	130	220	160	170	160	150
<b>Consumption</b>	58	28	30	56	44	38	45	50	21	30
<b>Exports</b>	95	22	40	209	98	115	175	130	142	97

## 2.2. Table olives



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

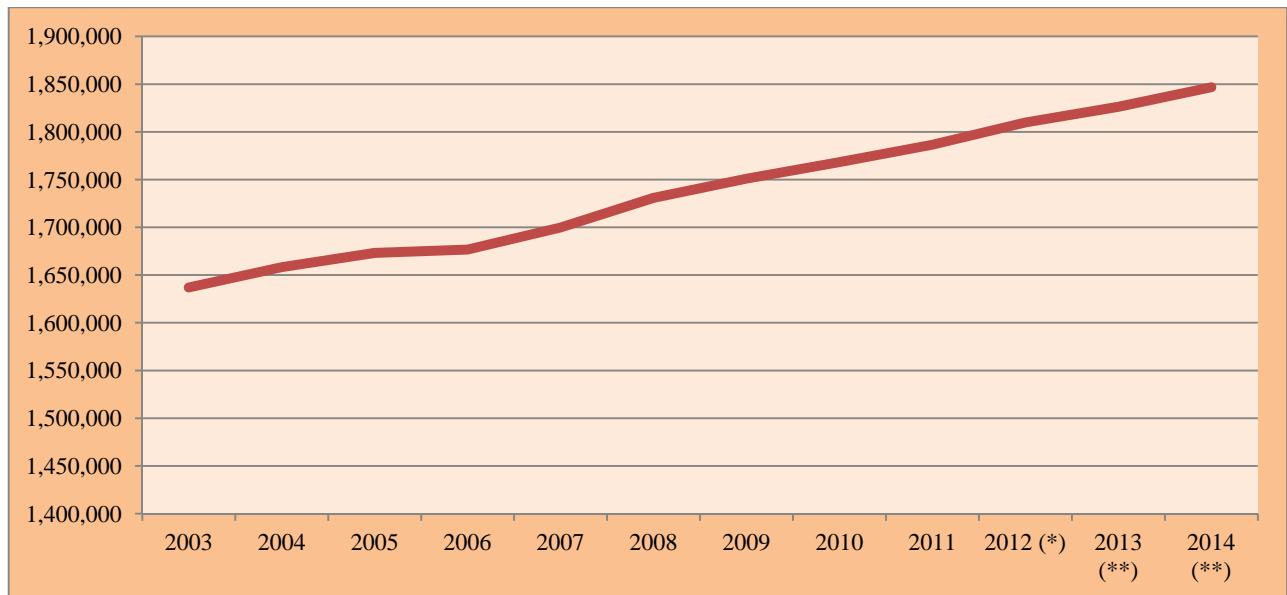
\* Estimates

\*\* 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
<b>Production</b>	11.5	6.5	6.5	26.0	13.0	26.5	15.0	18.0	18.0	22.0
<b>Consumption</b>	11.0	6.0	6.5	24.0	13.0	24.0	16.0	18.0	10.0	20.0
<b>Exports</b>	0.5	0.0	0.5	0.5	0.5	0.5	1.0	0.0	7.0	1.0

### 2.3. Total area planted



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

\* Estimates

\*\* Forecasts (Source: IOC)

### 3. OLIVE INDUSTRY IN TUNISIA

#### 3.1. Historical background

In Tunisia, the direct heir of ancient Carthage, it was the Carthaginians who started to plant olive trees across the country, on the island of Cyraunis (now Kerkena), Cap Bon, Byzacium and particularly around Hadrumetum (Sousse).

Driven by the desire to make Africa an olive oil producing region, the Roman emperors passed laws encouraging the expansion of olive groves and granting benefits to farmers who established olive orchards on uncultivated land or who replaced old groves with new ones.

In short, the olive oil trade was a source of wealth for all the civilisations that left their mark on the history of Tunisia. Olive oil was behind the affluence of notables and cities alike. This is borne out by an anecdote told by the Arab historian and geographer Ibn Abdellah in 647. After the defeat of Gregory the Patrician by the Arab army in Sufetula (Sbeitla), the townspeople laid pieces of gold at the feet of the conquering general. Intrigued by so much prosperity, the general enquired about its source. One of the locals started to walk away as if looking for something he had lost. Having found an olive, he brought it to Abdullah and said, "This is where our money comes from."

In recent decades, agricultural development policy has paid special attention to olive growing with the aim of raising yields, improving product quality and preserving varietal biodiversity. (Source: ONH)

#### 3.2. Orchard resources

Adapted to the soil and climatic conditions of Tunisia, olive trees are grown on almost 1.8 million hectares representing nearly 79% of the total tree area and 34% of the arable land.

Olive holdings account for almost 57% of all Tunisia's farms and differ in terms of size, working approach, performance and type of unit (agricultural conglomerates, cooperatives, State-owned land rented to groups of farmers, plots of State-owned land rented to qualified agronomists, and private farms).

With Tunisia's low, irregular rainfall, olive growing is mainly extensive and adapts planting density to average annual rainfall, namely:

- 100 trees/ha in the North where the rainfall is 400–600 mm
- 50–60 trees/ha in the Centre where the rainfall is about 300–350 mm
- 17–20 trees/ha in areas where the rainfall is 200–250 mm (Source: ONH)

Planting density also varies according to the conditions in which the orchards are farmed. Average density thus ranges from 40 to 100 trees/ha in dry farmed orchards, depending on whether the trees are for oil or table olives, while it is 240 trees/ha in irrigated orchards.

In 2009, the age structure of olive orchards in Tunisia was as follows:

- Young orchards (< 5 years) = 15.5% (272 700 ha)
- Bearing orchards (5–50 years) = 75% (1 312 300 ha)
- Old orchards (> 50 years) = 9.5% (164 000 ha). (Source: IOC questionnaire)

In 2010, the olive sector, i.e. olives and olive oil, held a 40% share of Tunisia's total agricultural exports.

### ***3.3. Location***

Olives are found in all the regions of Tunisia, from North to South and East to West. In the North and some parts of Central Tunisia they are cultivated with other annual crops (cereals or tree crops, citrus fruits, grapes, almonds) whereas in the South they are strictly a monoculture.

### ***3.4. Varieties***

Tunisia has inherited a rich varietal heritage thanks to its location at the crossroads of many civilisations, its position on the trading routes between the Orient, Africa and Europe and the migration of the Andalusians.

Nevertheless, two varieties – ‘Chemlali’ and ‘Chetoui’ – make up the bulk of olive growing in Tunisia. There are also other so-called secondary varieties specific to smaller regions such as the ‘Oueslati’, ‘Chemchali’, ‘Zalmati’, ‘Zarrazzi’, ‘Gerboui’ and ‘Sayali’ and further varieties grown in more restricted locations.

Depending on their end use, these varieties of olive are classified as dual-purpose or table, as can be seen from the table below.

**Table 3. MAIN TUNISIAN VARIETIES (Source: ONH)**

<b>Class</b>	<b>Varieties</b>
Dual-purpose varieties	Chetoui, Oueslati, Zalmati, Chemlali, Gerboui, Chemchali, Rkhami, Zarrazzi...
Table olive varieties	Meski, Sayali, Tounsi, Besbessi, Marsaline, Beldi, Fouji...

#### ***Agronomic classification of main Tunisian varieties***

##### **Chemlali**

This variety is grown in the warm coastal area and Low Steppes region. It accounts for nearly 85% of the area under olive cultivation and for more than 80% of domestic olive oil production. Its oil is not bitter or pungent and sometimes has a tomato flavour.

##### **Chétoui**

Found in the coastal area, valleys and highlands of the North, this variety is cultivated in almost 15% of Tunisia’s olive orchards. It gives very fruity oils with a predominant overtone of mown grass, which are highly rated for their content of phenolic compounds and anti-oxidants.

##### **Oueslati**

This variety is cultivated in the region of Kairouan. Its oils are very balanced and fruity, with little bitterness and a flavour reminiscent of fresh almonds.

##### **Zarrazzi**

This is a variety that is found in the South, mainly in oases, with some local variations. Besides giving very good table olives it is also appreciated for its high oil content despite the fact that it gives erratic, alternating crops.

### ***3.5. Olive oil: production and yield***

There are huge year-to-year swings in production, depending on various factors such as the characteristic alternate bearing pattern of the olive tree, rainfall and cultural practices. The extent of these oscillations is evident from Table 1 which reports tonnages as low as 35 000 t (2001/02) and as high as 280 000 t (2002/03), although the volume of production did appear to steady between 2006/07 and 2009/10. For 2010/11, the estimate is 120 000 t while the forecasts for 2011/12 assess production at around 180 000 t.

Viewed in terms of ten-year averages, Tunisia produced 172 800 t of olive oil per year in 1990/91–1999/00 (Table 4) compared with 150 7000 t in the 2000s, equating with a decrease of -12.79%.

However, the picture changes if we concentrate on the four crop years between 2005/06 and 2009/10 when it produced 282 000 t/year on average, which makes it the world's second biggest producer of olive oil, after the European Union.

Crop yields in conventional (non-organic) orchards came to 600 kg in 2008/09 and 500 kg in 2009/10.

### ***3.6. Olive oil: processing sector***

The regional breakdown of olive farms in Tunisia shows a situation where 32% is located in the North, 46% in the Centre and Sahel and 22% in the South.

Cultivation of oil-olives feeds a network of 1 707 olive oil processing facilities with a theoretical capacity of 43 680 t/8-hour day.

There are 613 traditional mills, 437 press mills and 657 continuous-process facilities, geographically distributed as follows:

- North: 18% (Tunis, Manouba, Ariana, Ben Arous, Bizerte, Beja, Jendouba, Le Kef, Siliana, Zaghouan, Nabeul)
- Sahel: 28% Sahel (Sousse, Monastir, Mahdia)
- Sfax: 33%
- Centre & South-west: 15% (Kairouan, Kasserine, Gafsa, Sidi Bouzid)
- South-east: 6% (Mednime, Gabès, Tataouine).

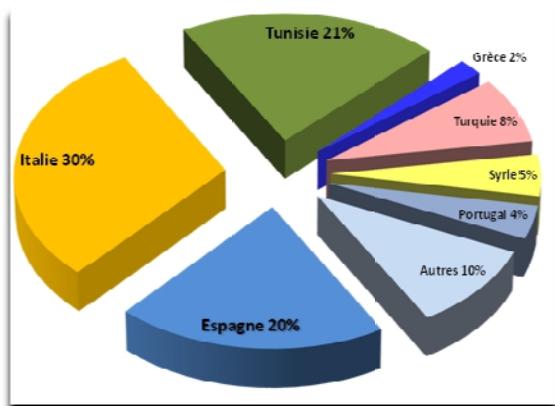
(Source: ONH)

Besides this network of mills, the processing sector also includes:

- 7 olive pomace oil extraction units whose capacity exceeds the volumes processed
- 40 packing plants with a total yearly capacity exceeding 160 000 t, including a dozen units specialised in olive oil only

To give an idea of the quality of olive oil produced in Tunisia, according to the figures released for 2009/10, 65% of the olive oils produced were extra virgin, 5% were virgin, 10% were ordinary virgin and 20% were lampante. (Source: IOC questionnaire)

### 3.7. Olive oil: domestic consumption and foreign trade



**Figure 5.** Distribution of world exports of olive oil by country (2005–2009), excluding intra-EU trade (Source: ONH)

With domestic consumption averaging 40 000 t through the 2000s, domestic consumption requirements are fully covered by home produced olive oil. It is noteworthy that olive oil consumption has fallen by -26.19% between the last two decades (see Table 4).

When it comes to exports, Tunisia holds a prominent position in the world olive oil market.

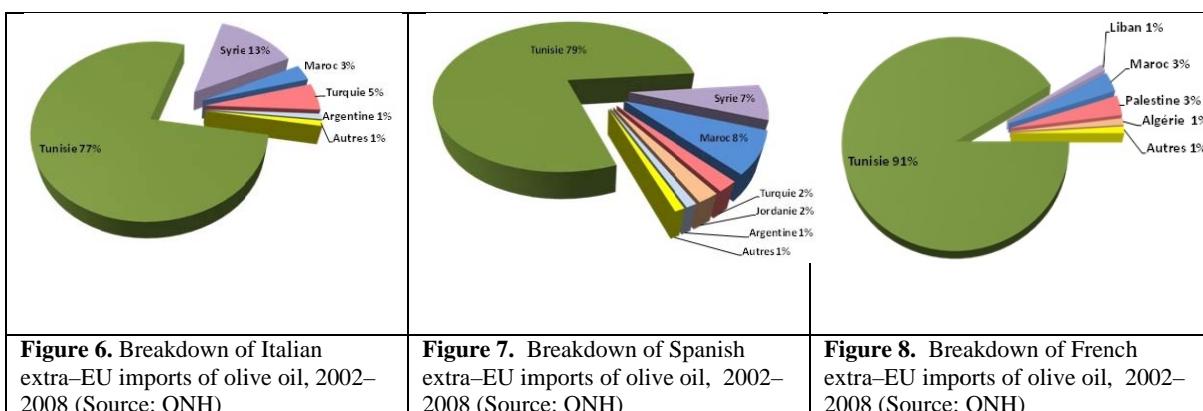
It exports about 75% of its production and is ranked the world's second largest exporter after the European Union (Figure 5), exporting an average of 165 000 t/year over the last five years (2005–2009), although when viewed in ten-year terms, exports have admittedly dropped between the 1990s and 2000s (-6.02%).

**Table 4. OLIVE OIL** (Source: IOC)

	Average (t) 1990/91–1999/00	Average (t) 2000/01–2009/10	Change (%)
Production	172 800	150 700	-12.79
Consumption	54 200	40 000	-26.19
Exports	119 550	112 350	-6.02

According to the latest EUROSTAT data available (for 2010), Italy was the EU's main buyer of Tunisian olive oil (52 125 t), followed by Spain and France, with 8 546 t and 5 370 t, respectively.

On average, Tunisian exports comprised 77% of Italy's extra-EU imports (see Figure 6), 79% of Spain's (Figure 7) and 91% of France's (Figure 8) over the five years from 2002 to 2008. (Source: ONH).



**Figure 6.** Breakdown of Italian extra-EU imports of olive oil, 2002–2008 (Source: ONH)

**Figure 7.** Breakdown of Spanish extra-EU imports of olive oil, 2002–2008 (Source: ONH)

**Figure 8.** Breakdown of French extra-EU imports of olive oil, 2002–2008 (Source: ONH)

Outside the European Union, Tunisian exports to the United States represented 12% of US olive oil imports in 2009.

Tunisian olive oil has also moved into other markets such as the Gulf countries (Saudi Arabia, UAE, Qatar, Bahrain, Yemen and the Sultanate of Oman) where there is not a tradition of consuming olive oil but consumers are beginning to realise the health-related benefits of this product.

Other producing countries such as Morocco, Syria and Jordan have imported Tunisian olive oil when their own supply is not enough. For instance, in 2009 Morocco imported around 10 000 t, Syria 1 500 t and Jordan 2 500 t. (Source: ONH)

### **3.8. Table olive subsector**

According to the figures for 2009 (bearing and non-bearing acreage), only 25 000 ha of olive crop area are dedicated to table olive production, of which 9 500 ha are irrigated and 15 500 are rainfed. Crop yields in conventional table olive orchards averaged 1 100 kg/ha in 2008/09 and 1 300 kg/ha in 2009/10. The processing sector comprises 25 table olive processing facilities and four packing plants.

In the 2000s annual production ranged from 6 500 t (2001/02 and 2002/03) to 26 000 t (Table 2), working out at an average of 16 300 t (Table 5). Calculated as averages, production rose by 28.85% between the 1990s and 2000s as can also be seen in Table 5.

Virtually all of table olive production goes for domestic consumption. This is clear from the figures shown in Table 2 which shows that consumption has ranged more or less within the same interval as production. Looking at the 10-season averages reported in Table 5, it emerges that consumption has also moved upwards, climbing by 21.72% between the 1990s and 2000s.

Lastly, Tunisia's table olive exports are on a much smaller scale than its olive oil exports, as is obvious from Table 1 which shows they generally hovered around 0.5 and 1 t, aside from the exceptional peak in 2008/09 (7 000 t). However, analysis of the averages for the 1990s and 2000s shows spectacular growth (155.55%) between the two ten-season periods.

**Table 5. TABLE OLIVES (Source: IOC)**

	Average (t) 1990/91–1999/00	Average (t) 2000/01–2009/10	Change (%)
Production	12 650	16 300	28.85
Consumption	12 200	14 850	21.72
Exports	450	1 150	155.55

### **3.9. Ongoing measures**

Tunisia realises the importance of promoting its olive oil exports. It has therefore opted for a strategy based on pioneering, promising initiatives and measures, including incentive funds for olive oil exporters and institutional supervisory assistance for investors in the olive oil sector.

#### *Support for exports*

- Export Market Access Fund (FAMEX): This is a project of the Ministry of Commerce, managed by CEPEX (Tunisian Export Promotion Centre) and funded by the World Bank, in a bid to promote exports of packed olive oil to growth markets.
- Export Promotion Fund (FOPRODEX): This is a financial support mechanism made available to exporters by the Tunisian government to help give them access to the international market. It is also managed by CEPEX.
- Fund for the Promotion of Packed Olive Oil (FOPROHOC)

*(Source: ONH)*

#### 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>

**EUROSTAT**

[http://epp.eurostat.ec.europa.eu/portal/page/portal/international\\_trade/database](http://epp.eurostat.ec.europa.eu/portal/page/portal/international_trade/database)

**ONH, Office National de l'Huile, Ministry of Agriculture of Tunisia**

<http://www.onh.com.tn>