

1. GENERAL DESCRIPTION OF OLIVE GROWING IN JORDAN

1.1. Introduction



Figure 1. Location of Jordan
(Source: UN)

The olive tree is one of the most important and oldest crops in Jordan where it is intertwined with the daily life and customs of Jordanian society and it has given rise to a significant heritage.

Between 15 and 20% of the 17 million olive trees in Jordan are around 2 000 years old. These very ancient trees are called “Roman olive trees” to signal their cultivation in Roman times.

Olive growing is of economic importance as a source of income. It covers about 72% of the total area planted with fruit trees in Jordan and 36% of the total cultivated area. Crop care has improved in recent decades and interest in olive growing has increased, as demonstrated by the 200% expansion in crop area between 1991 and 2006. Olives are now grown on about 126 000 ha. The two main producing areas are the Western mountains (rainfed) and the North-eastern area (irrigated). (Source: NCARE).

According to data released by the Ministry of Agriculture, approximately 80 000 families are employed in olive growing in Jordan (part-time).

1.2. Socio-economic indicators

- Area: 89 342 sq km (UN, 2008)
- Capital city: Amman (UN)
- Currency: Jordanian Dinar (JOD) (UN, 2009)
- Population: 6 316 (World Bank, 2009)
- Urban population: 79% (World Bank, 2010)
- Rural population: 22% (World Bank, 2010)
- Population growth rate: 1.4 % (UN, 2010/15)
- Life expectancy: 71.8 years (men), 75.7 years (women) (UN, 2010/15)
- Main exports by quantity: tomatoes and non-alcoholic beverages (FAOSTAT, 2009)
- Main imports by quantity: barley, maize and wheat (FAOSTAT, 2009)
- GNI per capita, PPP (current international \$): 5 800 (World Bank, 2010)
- GDP per capita, PPP (current international \$): 5 749 (World Bank, 2010)
- Employees in agriculture, female: 2% (World Bank, 2009)
- Employees in agriculture, male: 3% (World Bank, 2009)

2. BACKGROUND DATA

2.1. Olive oils

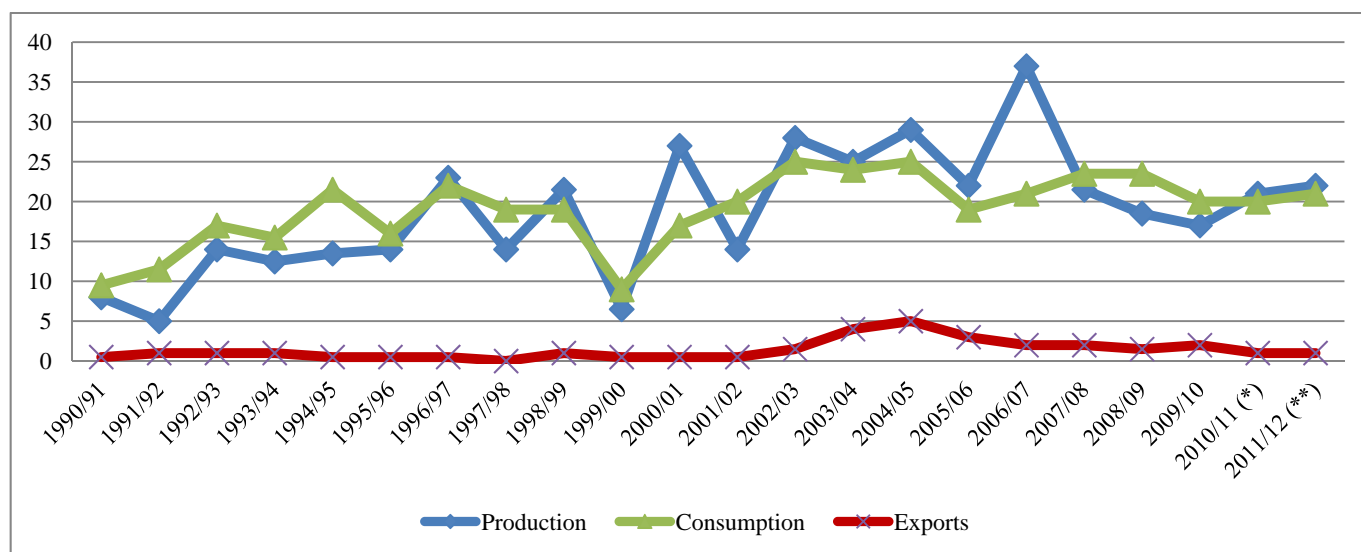


Figure 2. Olive oil production, consumption and exports 1990–2012 (1 000 tonnes)

* 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	2010/11	2011/12
Production	27.0	14.0	28.0	25.0	29.0	22.0	37.0	21.5	18.5	17.0	21.0	22.0
Consumption	17.0	20.0	25.0	24.0	25.0	19.0	21.0	23.5	23.5	20.0	20.0	21.0
Imports	0.5	0	0	0	0	0	0	0	1.5	5	0	0
Exports	0.5	0.5	1.5	4.0	5.0	3.0	2.0	2.0	1.5	2.0	1.0	1.0

2.2. Table olives

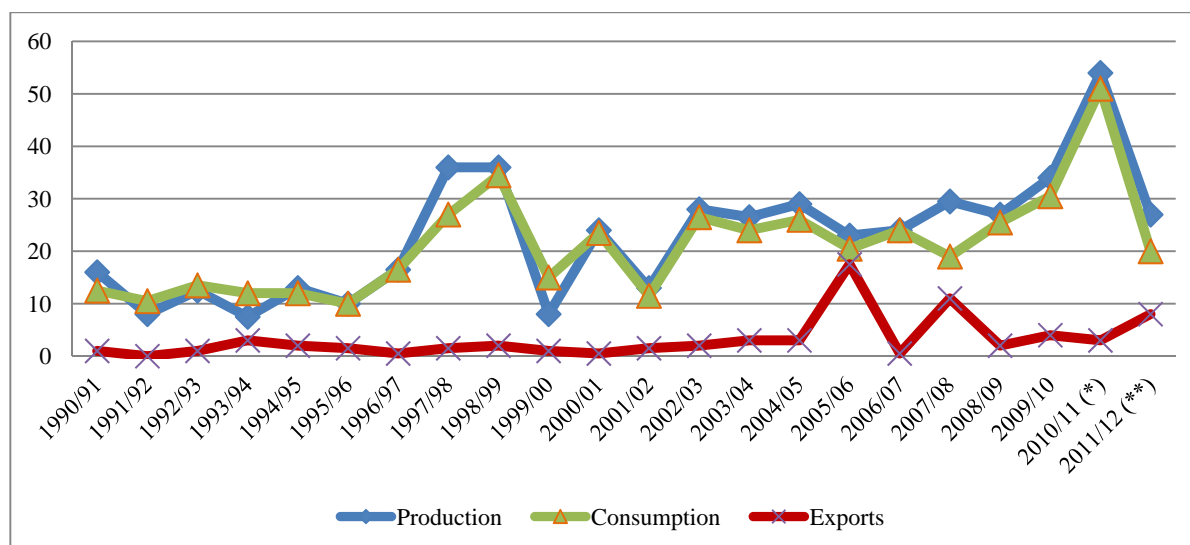


Figure 3. Table olive production, consumption and exports 1990–2012 (1 000 tonnes)

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

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	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Production	24.0	13.0	28.0	26.5	29.0	23.0	24.0	29.5	27.0	34.0	54.0	27.0
Consumption	23.5	11.5	26.5	24.0	26.0	20.5	24.0	19.0	25.5	30.5	51.0	20.0
Imports	0.0	0.5	0.5	0.0	0.5	15.0	0.5	0.0	0.5	0.5	0.0	1.0
Exports	0.5	1.5	2.0	3.0	3.0	17.5	0.5	11.0	2.0	4.0	3.0	8.0

2.3. Total area planted

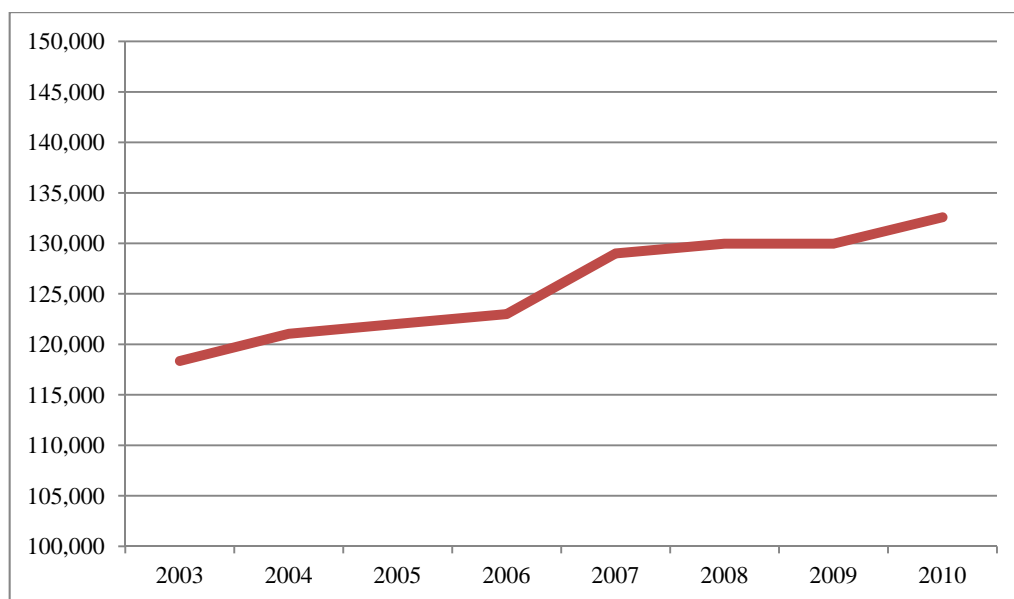


Figure 4. Changes in area planted with olive trees (ha) (Source: IOC)

3. OLIVE INDUSTRY IN JORDAN

3.1. Historical background

Jordan lies on the East Bank of the River Jordan in Western Asia. Although most of Jordan's territory is covered by the Arabian Desert, the North-West belongs to what is known as the Fertile Crescent, considered to be the cradle of civilisation.

According to the majority of studies, the origin of the olive lies in the Eastern Mediterranean. Following discoveries of an ancient village in the Rum area of Southern Jordan, joint papers by Jordanian and French archaeologists suggest that this region could be the oldest in the world where olives trees were cultivated.

3.2. Orchard resources

At present, Jordan is estimated to have 17 million trees. Approximately 80% of the trees bear crops and 20% are non-productive. Between 2003 and 2008, total olive crop area inched up from 121 050 ha to 128 995 ha.

Statistics show that about 24% of the area is under permanent irrigation. According to data from the Ministry of Agriculture, orchard density averages 180 trees/ha. Crop yields range from 60 kg/tree in irrigated orchards to 15 kg/tree in rainfed mountain orchards although oil yields are practically the same in both types of orchard (20%).

Geographically speaking, 48% of Jordan's olive trees grow in the North, 44% in the Centre and 8% in the South.

3.3. Varieties

The two most widespread varieties are Nabali Baladi and Rasi'i.

Nabali Baladi

This variety adapts well to all the olive producing regions of Jordan, growing in the Western mountain range and in the irrigated Eastern plains. It is dual-purpose and has a high oil content ranging from 20 to 35% and an oleic acid content of around 67–71%.

The tree has a vigorous and spreading growth habit. The fruit is small to medium-sized, ovoid in shape and asymmetric, and weighs 2–4 g on average. Its flesh is firm, adheres strongly to the stone and represents about 82% of the fruit's weight. The stone is medium sized, narrow and elongated with clear veins. It is considered to be drought tolerant and to show medium salt tolerance. It is resistant to most common olive pests and diseases.

Rasi'i

This variety is very widespread and is found across almost the whole of the country. It originates from the south of Jordan and is grown in mountainous areas with an annual rainfall of around 330 mm. Owing to its resistance to dry climates, it is also spreading to the drier, eastern parts of the country where it is grown with supplemental irrigation. It is hardy and it has a low rooting ability.

It has an intermediate start of bearing. Its time of flowering is also intermediate. It is self-compatible and it has a low pistil abortion rate. Its productivity is high and alternate. The fruit is used for green or black pickling as well for producing good quality oil. It is clingstone.

The percentage oil content of the fruit varies from 15% to 28% according to end use, growing area and whether or not irrigation is applied. It adapts readily to different climates and soils. It is very resistant to drought and cold climates, besides being tolerant of salinity. It is resistant to the most common olive diseases although it is sensitive to olive anthracnose.

(Source: World Catalogue of Olive Varieties, IOC)

3.4. Olive oil: production

Over the crop years from 2000/01 to 2009/10 Jordan's production of olive oil has fluctuated between a high of 37 000 t in 2006/07 and a low of 14 000 t in 2001/02 (Table 1). Comparison of the averages for the two decades reported in Table 4 (1990/91–1999/00 and 2000/01–2009/10) shows an upward trend from 13 200 t/year to 23 900 t/year, translating into 81.06% growth.

3.5. Olive oil: processing sector

Jordan's olive oil processing industry has undergone extensive modernisation in recent years. This is clear from the data given in Table 3, supplied by the Ministry of Agriculture, which show a gradual increase in the number of three and two-phase facilities, a decrease in press mills and the total disappearance of traditional oil mills.

TABLE 3. PRODUCTION INFRASTRUCTURE (Source: Ministry of Agriculture)

Units	2005/06 crop year	2010/11 crop year
Traditional oil mills	0	0
Oil mills with presses or super-presses	11	8
Modern three-phase oil mills	74	86
Modern two-phase oil mills	19	24
Total oil mills	104	118

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

Between the 2000/01 and 2009/10 crop years, domestic consumption of olive oil ranged from a low of 17 000 t in 2000/01 to a high of 25 000 t in 2002/03 and 2004/05 (see Table 1).

Over the 20 seasons covered in Table 4, domestic consumption averaged 18 900 t/year. However, viewed separately, mean consumption differed quite notably between the first and second decades (16 000 t and 21 800 t, respectively), recording growth of around 36.25%. Average per capita consumption of olive oil comes to 4.6 kg/year.

Jordan does little foreign trade in olive oil. In fact, it recorded negligible imports between 1990 and 2010 but it does export olive oil. Exports have in fact been increasing, although from a low starting level as can be seen in Table 4, which reports 238.46% growth in mean exports between 1990/91–1999/00 (650 t /year) and 2000/01–2009/10 (2 200 t).

Table 4. OLIVE OIL (Source: IOC)

	Average (t) 1990/91–1999/00	Average (t) 2000/01–2009/10	Change (%)
Production	13 200	23 900	81.06
Consumption	16 000	21 800	36.25
Exports	650	2 200	238.46

3.7. Table olives: production

Table olive production tends to alternate from season to season as can be seen from the figures shown in Table 2 and ranges from peaks of 29 500 t in 2007/08 and 29 000 t in 2004/05 and a low of 13 000 t in 2001/02. Looking at the figures over a wider time spread reveals that average yearly table olive output has recorded moderate growth (+57.79%), going up from 16 350 t to 25 800 t (Table 4).

There are 20 table olive packing plants in Jordan.

3.8. Table olives: marketing, domestic consumption and foreign trade

Over the seasons between 2000/01 and 2009/10 (Table 2) domestic consumption of table olives has ranged within an interval going from 11 500 t to 30 500 t. In average terms, it has experienced 41.28% growth between the two ten-year periods reported in the Table 5. Average per capita consumption of table olives works out at 0.6 kg/year.

Table 5. TABLE OLIVES (Source: IOC)

	Average (t) 1990/91–1999/00	Average (t) 2000/01–2009/10	Change (%)
Production	16 350	25 800	57.79
Consumption	16 350	23 100	41.28
Exports	1 350	4 500	233.33

The pattern of Jordanian exports is strongly influenced by the level of domestic production, as can be seen from Table 2, and reflects a marked up/down tendency, with a spectacular soar in 2005/06 (17 500 t). When converted into averages for the two decades reported in Table 5, the spectacular growth in exports (233.33%) is very striking.

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>

NCARE, National Centre of Agricultural Research and Extension

<http://www.ncare.gov.jo/OliveProgram/index.htm>