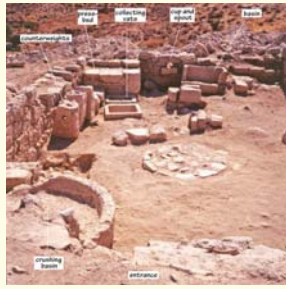


Fruit trees production in Southern Near East during Antiquity and early Islamic period (2nd c. BC-AD 7th c.)

Charlène Bouchaud

Olive (*Olea europaea* L.) and grapevine (*Vitis vinifera* subsp. *vinifera* L.) cultivations spread during the 4th and 3rd millennia BC in Near East (Tengberg 2012). Their importance into local agricultural economies during more recent times, although known, remains poorly understood.



Production Infrastructures

Archaeological findings of **wine** and **oil-producing infrastructures** suggest local **grapevine** and **olive cultivations**. They are regularly found during **Classical** and **early Islamic periods**. Some features such as the presence of a **pressing mechanism**, **vats** and **receptacles** are common to both types of infrastructures which make their distinction sometimes difficult. Nevertheless, **rotary crushing mills** clearly indicate oil making whereas large treading areas are generally designed for wine production (Brun 2004, Zerbini 2012).

Oil mill from Nabataeo-Roman period (AD 1st/2nd-4th c.) in Khirbet edh-Dharh (© Archaeological mission of Khirbet edh-Dharh, PPF)



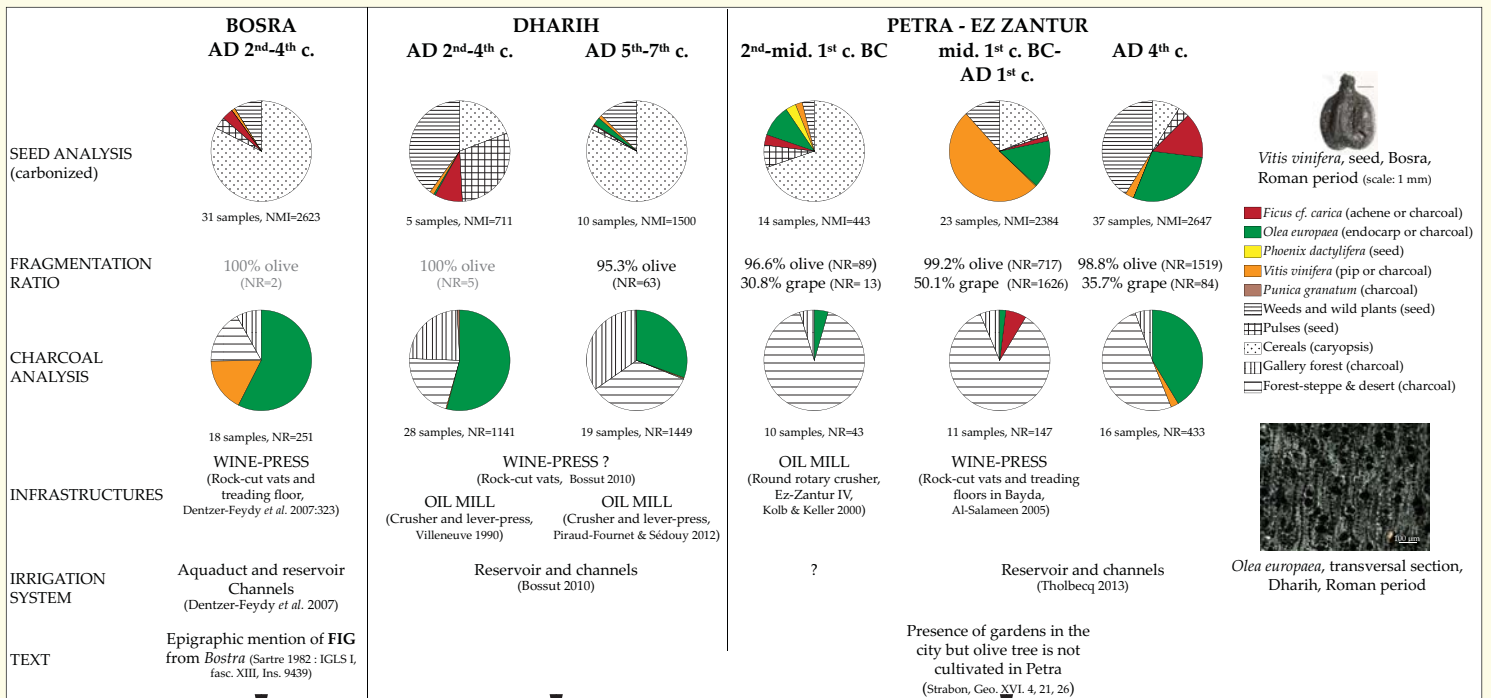
Grapevine plant on olive tree, Sleim, Southern Syria

Palynology indicator

The first centuries AD are marked by an increase of anthropogenic indicators (*Olea*, *Vitis*, *Juglans*) in the pollen sequences in the Golan Heights (Neumann *et al.* 2007) and around the Dead Sea (Neumann *et al.* 2010). It could be linked with an increase of agricultural activities and more humid conditions.

What are the place and role of fruit trees production and use into local economy during Nabataean, Roman and early Islamic periods in Southern Near East ?

Corpus	Nature of the site	Soil	Topography	Mean annual rainfall
Bosra	City	Clay on basalt		250-300 mm
Khirbet edh-Dharh	Rural habitat	Limestone & Fersiallitic		200 mm
Petra	City	Sandstone & limestone		100-400 mm



Presence of gardens around the city with small production of wine. Where are the olive grove and the oil-producing infrastructures ?

Local olive & grapevine production and transformation

Olive production and transformation inside the city since the 2nd-1st c. BC, probably increasing through time
Wine production inside the city during Classical Nabataean period (Jacquat & Martinoli 1999) and probably during the Late Antiquity

- Olive and grape vine cultivations are well integrated to agricultural system in Southern Near East during Antiquity and early Islamic time and probably mainly devoted to oil and wine making.

- Presence of charred seeds and charcoal in the archaeobotanical assemblages underlines their use as fuel.

- Further investigations are needed in order to know if these crops benefit from irrigation systems/ favorable climatic conditions.

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