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*Hatay'da Prehistorik Dönem'den Günümüze Zeytin Yetiştiriciliği ve Zeytinyağı Üretimine Yönelik Etnoarkeolojik Bir Çalışma Tokaçlı Örneği*

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**Citation** H.O. Tıbikoğlu, B. Özdilek & C. Karataş Yüksel, "An Ethnoarchaeological Study on Olive Cultivation and Olive Oil Production from the Prehistoric Period to the Present in Hatay: The Case of Tokaçlı" *Phaselis* XI (2025) 15-41. 10.5281/zenodo.16279304

Received Date: 12.05.2025 | Acceptance Date: 25.05.2025  
Online Publication Date: 21.07.2025

**Editing** Phaselis Research Project [www.phaselis.org](http://www.phaselis.org)



Geliş Tarihi: 12.05.2025  
Kabul Tarihi: 25.05.2025  
Yayın Tarihi: 21.07.2025

PHASELIS

XI (2025) 15-41  
DOI: 10.5281/zenodo.16279304  
journal.phaselis.org

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**Abstract:** The Levant Region, located at the northern end of Hatay, has been home to the wild olive tree, a common species of the Eastern Mediterranean's natural vegetation, since the Pleistocene. This region, key to humanity's cultural development, is where olives were first cultivated during the Chalcolithic and Early Bronze Ages. Archaeological research reveals that olive cultivation and oil production were prominent economic activities, especially during the Roman Period. Maintaining its economic significance during the Ottoman era, olive production continues today in Altınözü, Yayladağı, and Samandağ, where olives are processed on the limestone plateau slopes. Modern olive oil production is industrialized, yet ancient methods are still practiced in some villages for personal consumption and to meet market demands for high-quality products. Rural areas host olive pressing devices either in private gardens or communal spaces. The transformation of olives into olive oil in Hatay reflects ancient technical practices, sociological production organization, and the agricultural society's traditions and beliefs. In this context, Tokaçlı Village in Hatay is a significant traditional production area, providing valuable insights into the continuity of these practices.

**Keywords:** Olive and Olive Oil, Hatay-Antakya-Tokaçlı Village, Ethnoarchaeology, Antiocheia ad Orontes, Tokaçlı Village

**Öz:** Hatay'ın kuzey ucunda yer aldığı Levant Bölgesi, Pleistosen çağdan bu yana Doğu Akdeniz'in doğal bitki örtüsünün yaygın türlerinden biri olan yabani zeytin ağacına sahipliği yapmaktadır. İnsanlığın kültürel gelişim sürecinde kilit bir role sahip olan bu bölge, aynı zamanda zeytin ağacının ilk kez yetiştirildiği yerdir. Araştırmalar, evcilleştirilmiş zeytinin ilk olarak Kalkolitik ve Erken Tunç Çağlarında bu bölgede yetiştirildiğini göstermektedir. Bölgede yapılan arkeolojik araştırmalar, özellikle Roma Dönemi'nde zeytin yetiştiriciliği ve zeytinyağı üretiminin yaygın bir ekonomik faaliyet olduğunu ortaya koymaktadır. Osmanlı döneminde de kent ekonomisi için önemini koruyan zeytin, günümüzde de Altınözü, Yayladağı ve Samandağ ilçelerini kapsayan kalker masif platonun tepe yamaçlarında işlenerek zeytinyağına dönüştürülmektedir. Modern zeytinyağı üretimi genellikle sanayileşmiş bir sistemle işlenmektedir. Bunun yanı sıra bazı köylerde yerleşimciler hem bireysel tüketimlerini karşılamak hem de pazarın kaliteli ürün talebi nedeniyle zeytinyağı üretiminde eski süreçleri takip etmektedir. Kırsal yerleşimlerde evlerde özel mülkiyete ait zeytin sıkma cihazları/mekanizmaları bulunmaktadır. Hatay'da zeytinin yetiştiricilikten zeytinyağına dönüşümü, antik dönemin teknik

The bibliography of this study was carried out in the libraries of the British Archaeological Institute, the German Archaeological Institute in Munich, the German Archaeological Institute in Istanbul and the Koç University Anatolian Research Centre. We dedicate this work to Dear Cansu Çilingir, a singing teacher from Tokaçlı Village, who lost her life in the earthquake of 6 February.

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uygulamalarının yanı sıra sosyolojik örgütlenmenin üretimdeki rolü ve özellikle tarım toplumunun gelenek ve inançlarına dair kavrayışımızı genişletecek bir süreç izlemektedir. Bu bağlamda Hatay İli Altınözü İlçesi Tokaçlı Köyü önemli bir geleneksel üretim alanıdır.

**Anahtar Kelimeler:** Zeytin-Zeytinyağı, Hatay-Antakya, Etnoarkeoloji, Antiocheia ad Orontes, Tokaçlı Köyü

## Introduction

The Levant region (Fig. 1), with Hatay at its northern end, has been home to the wild olive tree (*Olea europaea oleaster*), one of the common species of the natural vegetation of the Eastern Mediterranean, since the Pleistocene Age (Fig. 2). This region, which has a key role in the cultural development of humanity, is also the place where the olive tree was first cultivated (Fig. 2). Researches show that olives were first cultivated in this region between the early Chalcolithic Period and the early Bronze Age. Inscriptional documents dating to the Bronze Age prove that several settlements in the Amik Plain under a centralised financial administration formed a structure specialised in olive and olive oil production activities. Archaeological research in the region reveals that olive cultivation and olive oil production was a widespread economic activity, especially during the Roman Period. Olives, which maintained their importance for the city's economy during the Ottoman Period<sup>1</sup>, are now processed into olive oil with an industrialised system from large areas covering the hill slopes of the limestone massif plateau in the south, north and east of the city, mostly in Altınözü district and Yayladağı and Samandağ districts (Fig. 3). In the Hanyolu village of Altınözü, there are rock-carved hybrid spaces of farmhouses and olive oil workshops<sup>2</sup>. The design of the farmhouses is common with the 4th-7th century AD settlement on the limestone massif called Limestone Hills in Syria. The calcareous massif called Limestone Hills in Syria, and it is observed that the topography and rural landscape are similar<sup>3</sup>. The Gelindağı Necropolis in the village of Altınözü kule Çiftlik was used as a cemetery from the Roman Period until the Byzantine Period, a cross was carved in a phase after the grave function, and the rock grave chamber was probably converted into an olive oil workshop in Late Antiquity<sup>4</sup>. In Yunushanı Village, ancient agricultural terraces and olive groves were found in Boğaz Mevkii<sup>5</sup> and olive oil processing complexes were identified in Kıyma Mevkii<sup>6</sup>, and it was observed that one of the processing complexes is now used as units serving the village house<sup>7</sup>.

Nevertheless, in some villages, the inhabitants follow the processes applied in the ancient period in olive oil production to meet their personal consumption as well as the market demand for quality products. In rural settlements, there are olive pressing devices for private ownership in home gardens or for common use in squares. The transformation of olives from cultivation to olive oil in Hatay follows a process that will expand our understanding of the technical practices of the ancient period, as well as the sociological organisation of production and the traditions and beliefs of the agrarian society in relation to olives. In this context, Tokaçlı (Village) Neighbourhood of Altınözü District of Hatay Province is an important traditional production area (Fig. 4).

<sup>1</sup> Ateş 2022, 43-76.

<sup>2</sup> Pamir et al. 2009, 4.

<sup>3</sup> Tchalenko 1953a, 1-6, 413; Tate 1992, 52-55.

<sup>4</sup> Pamir et al. 2020, 235-236.

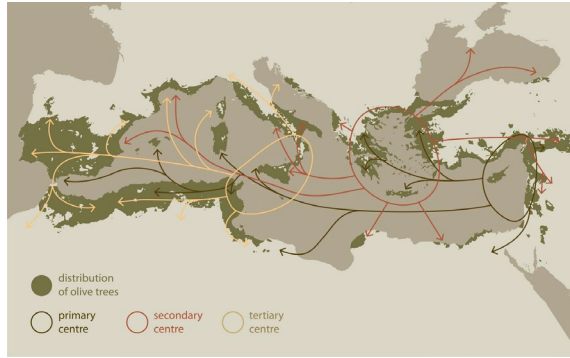
<sup>5</sup> Pamir et al. 2009, 6.

<sup>6</sup> Pamir et al. 2020, 238.

<sup>7</sup> Pamir et al. 2020, 235, 238, 240.



Fig. 1. Ancient Hatay Region, Atlas of the Greek and Roman



2.Map showing the routes of olive trees in the Mediterranean basin ([https://www.facebook.com/TheArchaeologistOfficial?locale=ms\\_MY](https://www.facebook.com/TheArchaeologistOfficial?locale=ms_MY) access date: 8.1.2024).

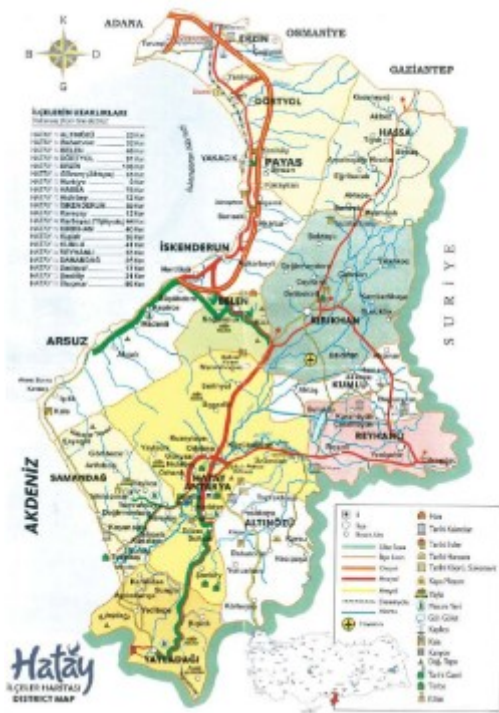


Fig. 3. Hatay Districts,(TC Hatay Valiligi / Hatay Governorship-in-Antakya)

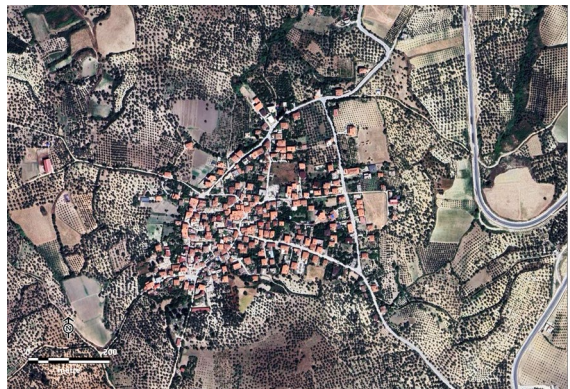


Fig. 4. Tokaçlı Village Aerial Photo, (Google Earth M. Şimşek 2024)

### The Journey of Olive Cultivation in Hatay from Past to Future

The olive tree<sup>8</sup>, which first took root in the wild in the Eastern Mediterranean and spread throughout the Mediterranean geography (Fig. 2), has become one of the ancient symbols of the vital power of nature in human life with its long-lasting shoots and its evergreen and nutritious fruit, and has been called the 'immortal tree'<sup>9</sup> as a symbol of an existence characterised by the concepts of justice and peace. The earliest evidence that the olive tree, one of the oldest cultivated plants, was domesticated and became an important part of the human economy is found in the Levant between the Chalcolithic Period and the Bronze Age. Shortly afterwards, olive cultivation became an important economic value for the cultures of the Bronze Age and later the Iron Age, which were settled in the Amik Plain and the surrounding mountainous terrain in the north, in close contact with this cultural geography, in the province of Hatay today. During the Iron Age, the expansionist policies of the Assyrian Empire from the east and the Hellenes from the west over Anatolia, and the expansion of the Phoenicians in the Mediterranean maritime trade resulted in the ancient port settlements of Al-Mina and Sabuniye on the coasts of the Samandağ district of Hatay becoming important centres of the Mediterranean trade network (Fig. 2). In the following period, the shift of settlement areas to lands that enabled widespread and efficient agricultural production led to the growth of agricultural production, including olive cultivation<sup>10</sup>. As a matter of fact, archaeological research show that olive cultivation activities continued to increase in and around Antiocheia during the Roman Period and that it provided income to the city as an export products.

With its historical impact on the sustainability of human life in the Mediterranean world, the olive continues to be a part of the life of the people of Hatay today, both economically and as a cultural pattern. Today, olive trees continue to be cultivated in large rural areas covering the hill slopes of the limestone massif plateau in the south, north and east of Hatay (Fig. 3), mostly in Altınözü district, Yayladağı and Samandağ districts and other districts. In the 2022-2023 production season, nearly 140 thousand tonnes of fruit is expected to be obtained from more than 14 million olive trees suitable for harvesting in Hatay<sup>11</sup>.

Some of the phenomena identified archaeologically and historically for olive cultivation and the cultural behaviours it generates can still be observed especially in the rural life of Hatay. In this context, Tokaçlı Village (Neighbourhood) of Altınözü District of Hatay Province is an important area of study (Fig. 4); it reveals practices that will expand our understanding by enabling a temporal perspective on the agricultural society in the specific case of olives. Nevertheless, our study, while evaluating the archaeological information on the ancient olive cultivation activities of Hatay with the modern ethnographic data from Tokaçlı, does not aim to present a complete view of a direct interaction between ancient and modern societies and to reveal an uninterrupted cultural process, but instead aims to shed light on some of the correlations between economy and culture by considering ancient and modern practices on this subject.

<sup>8</sup> The word olive comes from the Arabic root zyt, which is the plural of zayt "olive" and zaytūn meaning "olive grains". However, Aramaic/Syriac zeytā is cognate with Hebrew zayt and Phoenician "zyt". The word is thought to be derived from a pre-Semitic language of the eastern Mediterranean basin, see word "zeytin; zaytūn" on [www.etimolojiturkce.com](http://www.etimolojiturkce.com); [www.nisanyansozluk.com](http://www.nisanyansozluk.com) / access date: 16.06.2023.

For general overview Ünsal 2003; [https://www.adatepe.com/images/adatepestatic/adatepe\\_brosur\\_k.pdf](https://www.adatepe.com/images/adatepestatic/adatepe_brosur_k.pdf) (Erişim: 5.05.2023).

<sup>10</sup> Casana & Wilkinson 2005, 41.

<sup>11</sup> For general overview: Üretim Sezonu Sofralık Zeytin ve Zeytinyağı Rekoltesi Ulusal Resmi Tespit Heyeti Raporu, İzmir 2022, Kaynak: [https://www.antalyaborsa.org.tr/\\_fm/206-202211091305491.pdf](https://www.antalyaborsa.org.tr/_fm/206-202211091305491.pdf) (access date: Eylül 2023)

## The Emergence, Spread, Domestication and Economic Use of The Olive Tree

### Archaeological Evidence Extending from General Geography to the Geography of Hatay:

The olive (*Olea europaea*)<sup>12</sup> is an iconic species due to its ecological, economic and cultural importance, witnessing the migrations, colonisation, rise and fall of societies that have generally developed differently from the Pleistocene Age to the present day, in short, the historical journey of human beings (Fig. 2).

Despite the geographical diversity, there are contributions from different disciplines in the interpretation of the Mediterranean climate and vegetation and in defining the boundaries of the Mediterranean Basin<sup>13</sup>. Fernand Braudel, a renowned historian known for his work on the Mediterranean world, used the olive tree as a floristic criterion to define the boundaries of the region<sup>14</sup>. In the Mediterranean Basin, it has been determined that two species of olive, wild (*Olea europaea* subsp. *Europaea* var. *Sylvestris*) and cultivated (*Olea. Europaea* subsp. *Europaea* var. *Europaea*), co-exist in many regions<sup>15</sup>. It is now known that the cultivated species of olive in the Mediterranean Basin has about 2000 cultivars<sup>16</sup>. The current diversity of the olive is probably related to its spread to harsh environments (northern latitudes, deserts and higher altitudes, etc.), as an outcome of the complex and continuous interaction between man and nature during the cultivation process<sup>17</sup>. This long and continuous process has been characterised by the interbreeding of cultivated olive and wild olive genes<sup>18</sup>.

Since data on the origin of the olive and the spread of its cultivated form are available from various disciplines such as archaeobotany, palynology, DNA and palaeoclimatology, different and multifaceted hypotheses have been put forward. However, the earliest evidence for its use comes from burnt olive tree remains recovered together with wild barley and wild grapes from Gesher Benot Yaaqov in the Hula Valley (Northern Israel), dating to about 790,000 thousand years ago. These data indicate that hominins had knowledge of the controlled use of fire, which they practised for much of the Acheulian cultural period<sup>19</sup>. The assumption that the use of olives as wood and fuel has great advantages over animal fats makes it likely that hominins in the southern Levant utilised the olive tree in this way<sup>20</sup>. Palynological data from the region are also largely consistent with the archaeological record of the earliest use of olives<sup>21</sup>.

Evidence for the use of wild olives as a food product in the Mediterranean also dates back to very early dates. However, it should be noted that the data on the use of olives in the Palaeolithic period is quite insufficient. This is attributed by some researchers to the scarcity and absence of vegetation. Nevertheless, DNA analyses and species distribution modelling show the capacity of wild olives to survive in sheltered areas during the Pleistocene. Charred and crushed olive pits from two caves dating to around 100,000 years ago in the Rabat-Temara Region, located on the Atlantic coast

<sup>12</sup> The word olive comes from the Arabic root zyt, and zayt is the plural of "olive" and zaytūn means "olive grains". However, Aramaic/Syriac zeytā is cognate with Hebrew zayt and Phoenician zyt. The word is thought to be derived from a pre-Semitic language of the Eastern Mediterranean basin. See [www.etimolojiturkce.com](http://www.etimolojiturkce.com); [www.nisanyansozluk.com](http://www.nisanyansozluk.com) / access date: 16.06.2023.

<sup>13</sup> Temuçin 1993, 118-119; Arslantürk & Ketenoğlu 2008, 79-80; Hadziiosif 2018, 96.

<sup>14</sup> Braudel 2017, 212.

<sup>15</sup> Barazani et al. 2023, 1-2; Marquer et al. 2022, 204; Zohary & Spiegel-Roy 1975, 319-321.

<sup>16</sup> Breton et al. 2012, 8; Kaniewski et al. 2023, 2; Barazani et al. 2023, 6.

<sup>17</sup> Breton vd. 2012, 16.

<sup>18</sup> Besnard et al. 2013, 6.

<sup>19</sup> Goren-Inbar et al. 2004, 727.

<sup>20</sup> Breton et al. 2012, 5; Marquer et al. 2022, 205.

<sup>21</sup> van Zeist & Bottema 2009, 105.

of Morocco and the southern part of the Iberian Peninsula, provide evidence that Early Homo Sapiens hunter-gatherer communities used wild olive fruits for food and pits for fuel<sup>22</sup>. In addition, the palynological record from Carihuela Cave in Granada<sup>23</sup>, southeastern Spain, dating to the Pleistocene Epoch, and the 60,000-year-old olive fossil recovered from volcanic ash on Thera (Santorini), one of the Cycladic Islands in the Aegean, are among the earliest olive records from both regions<sup>24</sup>. The earliest evidence for the use of olives as food and oil, and suggesting a possible first domestication experience, comes from the Epipaleolithic site at Ohalo on the Sea of Galilee coast in the southern Levant<sup>25</sup>. As mentioned above, the first cultivation of olives is a complex and multidimensional issue, especially due to the long-term reciprocal gene flow, and thus beyond the limits of this study. However, it should be noted that it is the generally accepted, albeit controversial, view that olive cultivation first started in and around the southern Levant through artificial selection from wild populations and then spread to different parts of the Eastern Mediterranean Basin<sup>26</sup>.

Strong hypotheses have been put forward for the use of wild olives for food, fuel, lighting and possibly medicinal purposes by Eastern Mediterranean human groups from the Pottery Neolithic onwards. The intensive utilisation of olives, especially as a food product, corresponds to the Late Pottery Neolithic<sup>27</sup>.

Thousands of crushed olive pits recovered in association with stone basins and baskets, possibly serving as colanders, from the Kfar Samir site (Late Neolithic/Early Chalcolithic) on the coastline of Mount Carmel/Kermil in Israel, dating to about 7500 years ago, as well as a jar with olive oil residues from the contemporary site of Ain/Ein Zippori, are the earliest strong evidence for the use of olive oil as a food product in the southern Levant<sup>28</sup>. In addition, olive pits recovered from the Neolithic and Chalcolithic levels of Yumuktepe, which share cultural similarities with sites in northern Syria, offer new insights into the early use of olives and the multicentric spread of this practice<sup>29</sup>.

In the Levant, despite the fluctuations in the increase in olive pollen from the Epipaleolithic to the Pottery Neolithic, the most significant increase is reported to have first appeared in the Chalcolithic Period<sup>30</sup>. The palynological data are supported by archaeological and archaeobotanical evidence from the Chalcolithic sites of Teleilat Ghassul, Tel Tsaf, Abu Hamid, el-Khawari, Rasm Harbush, Samaria, and Tell esh Shuna for domesticated forms of olive cultivation, oil extraction techniques, and the extensive presence of olives<sup>31</sup>. In particular, archaeobotanical finds, pollen data and radiocarbon dating indicate<sup>32</sup> that olives were first cultivated in the south-eastern Mediterranean approximately 7000-6500 years ago<sup>33</sup>. However, some recent DNA studies suggest that the northern Levant, especially the part of the region that forms the present-day Syria-Turkey border, was the

<sup>22</sup> Marquer et al. 2022, 204-207.

<sup>23</sup> G.Ö. 117.000-41.000 bkz. Fernández et al. 2007, Fig.8.

<sup>24</sup> <https://www.retreeve.gr/blog/The-origins-of-the-Olive-Tree-in-the-Prehistoric-Aegean;>  
<https://greekreporter.com/2022/12/09/fossilized-olive-leaves-santorini/> access date: 18.06.2023.

<sup>25</sup> Kislev et al. 1992, 162; Weiss et al. 2004, 128.

<sup>26</sup> Kaniewski et al. 2012, 888; Besnard et al. 2013 5-6; Fiorentino et al. 2014, 88; Gurbuz-Veral et al. 2016, 16; Sabatini 2019, 247; Langgut et al. 2019, 1-3; Galili et al. 2021, 1-2; Barazani et al. 2023, 2.

<sup>27</sup> Breton 2012, 10; Galili et al. 2018, 53; Galili et al. 2021; Marquer et al. 2022, 204; Kaniewski et al. 2023, 2; Barazani et al. 2023, 3-4.

<sup>28</sup> Namdar et al. 2015, 65-72.

<sup>29</sup> Fiorentino et al. 2014, 88.

<sup>30</sup> Yasuda et al. 2000; Wilkinson 2003, 26-27, Fig. 2.6; Litt et al. 2012, Fig. 3, 5.

<sup>31</sup> Kaniewski et al. 2012; 891; Barazani et al. 2023, 3-4.

<sup>32</sup> Radiocarbon dates from the Jordan Valley sites of Teleilat Ghassul and al-Khawarij give a BP range of 6400–6270. See Kaniewski et al. 2012, 891.

<sup>33</sup> Zohary & Spiegel Roy 1975, 319; Zohary et al. 2012, 5; Langgut et al. 2016, 7; Langgut et al. 2019, 15; Galili et al. 2021, 2; Kaniewski et al. 2023, 219-217; Barazani et al. 2023, 3.



first region where olives were cultivated<sup>34</sup>. A combination of carbonised olive pits recovered from the Neolithic and Chalcolithic levels of Yumuktepe and wild olive samples from the southern Taurus Mountains suggests that the first cultivation may have taken place in this region<sup>35</sup>.

Although there is ample evidence that olive cultivation in the Levant began in the 5th millennium BC, it is observed that it increased especially in the Early Bronze Age and became more prominent in economic terms. This is generally associated with the urbanisation indicators of the period, such as the intensification of agricultural production in the region, specialisation, storage, transport and exchange of surplus products.

Pollen data obtained from Galilee in the Southern Levant during the early phases of the Early Bronze Age indicate a sudden increase in olive cultivation<sup>36</sup>. A similar increase is reported to have occurred in the Northern Levant (Tell Sukas pollen record) around 2900 BC.<sup>37</sup> However, in a study calculating the proportion of charred olive tree fragments recovered from 47 archaeological sites in Israel, an increase from 20-30% in the Chalcolithic to 40-60% in the Early Bronze Age was recorded. These data are recognised as indicators of the use of cultivation practices such as cutting, pruning and perhaps irrigation, which are important to support or control olive production<sup>38</sup>.

The best-preserved examples of these production facilities, some of which were located directly under the control of the palace and within the city walls, and some of which were located directly within the palace buildings, were found at Tel Yarmouth, Tell Es-Sa'idiyeh, Beth Yerah EBA II-III. It is believed that these settlements with rural production and storage areas under their control had a complex olive oil economy<sup>39</sup>. Moreover, from the early phases of the Early Bronze Age onwards, new settlements in the highlands or mountainous areas of the Southern Levant and the demographic increase have been associated with the external demand for olive oil<sup>40</sup>. Pottery recovered from the Abydos U-j tomb from the mountainous regions of the southern Levant belonging to olive and wine production are considered to be indicators of olive oil trade with Egypt during this period. Especially the olive oil and wine jars (Combed Ware) imported from the Levant found in the tombs of the IVth and VIth Dynasties and the description of 'Combed Ware'<sup>41</sup> on the tablet depicting the seven sacred oils from the Ankh-haf tomb at Giza prove that olive oil was one of the luxury goods traded between the Levant and Egypt<sup>42</sup>. Data from small centres with specialised agricultural economies, such as Byblos and Tell Fadous-Kfarabida, both under the probable control of Byblos, suggest that olive oil export relations with Egypt during the Early Bronze Age II-III took place through the northern Levant settlements and mostly by sea<sup>43</sup>.

Palynological data from the end of the Early Bronze Age to the Late Bronze Age indicate a decline in the presence of olives in the southern Levant. This trend has been attributed not only to a sudden climatic change or drought, but also to the collapse of the urban systems of the Southern Levant at the end of the EBA IV and the consequent crisis in agricultural organisation. The absence of complex olive oil production facilities in the cities, the sharp disappearance of Combed Ware pottery in Pa-

<sup>34</sup> Besnard et al. 2013, 6; Langgut et al. 2016, 15.

<sup>35</sup> Fiorentino et al. 2014, 88.

<sup>36</sup> Langgut & Finkelstein 2016, 6, Fig.2, Fig. 4.

<sup>37</sup> Sorrel & Mathis 2016, Fig. 5a.

<sup>38</sup> Kaniewski et al. 2012, 891.

<sup>39</sup> Sabatini 2019, 248.

<sup>40</sup> Langgut et al. 2016, 8-9; Barazani et al. 2023, 4.

<sup>41</sup> Badreshany et al. 2020, 160-196.

<sup>42</sup> Philip 2008, 161-226; Sabatini 2019, 253-257, Fig. 5-6.

<sup>43</sup> Langgut et al. 2016, 14; Genz et al. 2016, 112-113.



Lebanon and Egypt, as well as the drastic reduction of settlements in rural areas are important archaeological indicators of the continuity of production for local consumption on a smaller scale rather than industrial production<sup>44</sup>. Archaeobotanical and archaeological data from the Palace of G at Ebla in the northern Levant (IBA IV), one of the preferred sites for olive oil production centres as of the last phases of the Early Bronze Age, provide evidence that olive oil was produced both in the countryside of Ebla and in small quantities within the palace. For example, a cuneiform text reports that 5635 jars of oil were delivered to the king in one year by the villages under the city's control. In addition, cuneiform texts mentioning olive groves belonging to kings, queens and high-ranking officials in the immediate vicinity of Ebla also suggest that the city met most of its olive oil needs from outside the city<sup>45</sup>.

Similarly, the Middle and Late Bronze Age (Strata VII and IV) written sources of Alalakh, centred on the Amik Plain, contain extensive information on land ownership, inter-city exchange and purchase<sup>46</sup>. It is reported in these sources that certain administrative privileges were granted to settlements specialised in olive oil and wine production in the immediate vicinity of the Amik Plain. These settlements, some of which were subordinate to Alalakh and some of which were autonomous, are thought to have paid their taxes to the centre to which they were subordinate on the olive oil they produced or to have received their share from their own production<sup>47</sup>. A group of letters in the Mari archives also emphasise the suitability of Alalakh for specialised agricultural production. The Kuseyr Plateau<sup>48</sup>, which lies just south of the Amuq Plain and hosts many mounds containing Pre/Protohistoric strata in the valley<sup>49</sup> systems connecting to the plain, is considered the most suitable region for the settlements referred to in the Alalakh texts due to its dense olive vegetation in wild and cultivated forms<sup>50</sup>. In fact, both historical and archaeological data prove that the region was an important olive oil and wine production centre in antiquity<sup>51</sup>. This administrative structure at Toprakhisar also draws attention with its similarity to the palaces in the known centres in the region<sup>52</sup>. It is foreseen that the economic and cultural dimensions of Bronze Age olive cultivation in the Amik Plain and its vicinity, which have not been sufficiently defined so far, can be evaluated through Toprakhisar Höyük data<sup>53</sup>.

The Middle Bronze Age levels of Oylum Höyük in Kilis, another site close to the Amuq Plain, although not as close as the Kuseyr Plateau, yielded a similar administrative structure with a large number of burnt olive pits and possible olive oil storage vessels covered with wax. The role of Oylum Höyük, another settlement that has provided archaeological-archaeobotanical data on olive consumption and olive oil production in recent years, in the Eastern Mediterranean olive trade is emphasised by referring to written sources from its contemporary Ebla<sup>54</sup>.

The most detailed data on interregional trade in the Late Bronze Age come from the Uluburun

<sup>44</sup> Sabatini 2019, 257-258, Fig. 7; Langgut et al. 2016, Fig. 4.

<sup>45</sup> Peyronel et al. 2014, 35.

<sup>46</sup> Akar & Kara 2018a, 99; Akar & Kara 2018b, 240.

<sup>47</sup> Akar & Kara 2018a, 99; Akar & Kara 2018b, 240; Akar & Kara 2020, 81.

<sup>48</sup> Akar & Kara 2020, 81.

<sup>49</sup> Pamir & Henry 2018, 505-519; Pamir et al. 2019, 215-234; Pamir et al. 2020, 231-252; Karataş Yüksel & Pamir 2021, 323-336; Pamir & Karataş Yüksel 2022, 89-106; Pamir et al. 2023 249-264.

<sup>50</sup> Casana 2008, 433-434; Akar & Kara 2018a, 100; Akar & Kara 2018b, 250-251; Akar & Kara 2019, 262-263; Akar & Kara 2020, 80-81; Akar et al. 2021, 75-95.

<sup>51</sup> Pamir 2010, 75-77.

<sup>52</sup> Akar & Kara 2018b, 250-251.

<sup>53</sup> Akar & Kara 2018b, 251.

<sup>54</sup> Engin 2019; 238-241.

shipwreck, dated to the late 14th century BC<sup>55</sup>. The extensive cargo carried by the ship includes several Canaanite jars with a large number of olive pits, olive oil mentioned in the Linear B tablets and transported for use as raw material in perfume making, Cypriot ceramics used for liquid transport (most likely olive oil), coarse Minoan vessels with stirrup handles, and a large number of ceramic vessels, including lamps used on board, which appear to have been produced from clays just north of the Galilee coast. The Uluburun shipwreck provides comprehensive data on the routes and products of an extensive trade network that included the eastern Mediterranean, the Aegean, Egypt and Cyprus<sup>56</sup>. Other important data on the use and trade of olives in the Late Bronze Age are Ugaritic and Akkadian tablets from Ugarit and Egypt<sup>57</sup>. At Ugarit, on the Mediterranean coast, clay tablets relate to the purchase of olive groves, taxes paid in kind, and rations paid to wage labourers and staff. In these texts, olive tree products, which are not native to Mesopotamia, are mentioned as luxury consumer goods for medicinal or aromatic purposes<sup>58</sup>.

Although there are many written sources on the production and distribution processes of olive oil and wine in the Eastern Mediterranean during the Late Bronze Age, the number of archaeological evidence is quite limited. For this reason, inferences/assumptions regarding the use and trade of olive oil in the period in question are attempted to be reached through the data obtained from culturally similar settlements, parallels in material culture, or periodic settlement densities by taking into account the terrain characteristics. For example, the increasing density of settlements on the Qusair Plateau, which is located in the ecological belt of olive cultivation, suggests that the settlements in the region were used as olive production centres or rural production centres, perhaps as in Antiquity. As a matter of fact, as mentioned above, the only settlement excavated so far in the plateau, Toprakhisar Höyük, has started to yield data on the use of olives<sup>59</sup>. It is quite possible that the region, which still hosts intensive olive cultivation activities today, was part of the interregional trade network in the Bronze Age. The Kamares Ware<sup>60</sup> imported vessels recovered from the Middle Bronze Age levels of Alalakh and the Mycenaean vessels recovered from the immediately following levels indicate that the city acquired the status of a trade centre within the developing networks of maritime and land trade from this period onwards. In addition, the fact that the city was connected to the port city of Sabuniye by river transport via the Asi River strengthens the possibility of an interregional Eastern Mediterranean trade network<sup>61</sup>.

The expressions in ancient written sources about Mount Kilic/Kel Mountain (Cebel Akra) at the southernmost tip of Hatay, which opens to the Mediterranean Sea, support the fact that the region has been a part of the Eastern Mediterranean trade network since the Late Bronze Age. Mount Kılı<sup>62</sup>, which is referred to as Hazi/Hazzi Mountain in cuneiform texts, associated with the active gods of two different regions and cultures such as Tešup and Baal, and whose sanctity is frequently emphasised, is recorded together with Tešup, the 'patron god of trade', in a Hittite tablet recovered from Boğazköy<sup>63</sup>. In the Assyrian texts of the later period, Mount Kilic is mentioned not only as a sacred site but also as a place where copper ore was supplied<sup>64</sup>. Written sources, stelae and rock

<sup>55</sup> Pulak 2008, 290-291.

<sup>56</sup> Haldane 1993, 353-354; Pulak 2008, 290-299.

<sup>57</sup> Barazani et al. 2023, 1-2.

<sup>58</sup> Kaniewski et al. 2012, 892.

<sup>59</sup> Akar & Kara 2018b, 250-251.

<sup>60</sup> Akar et al. 2021, 87-90.

<sup>61</sup> Akar 2013, 87-88.

<sup>62</sup> Yıldırım 2022, 1.

<sup>63</sup> Yıldırım 2022, 8.

<sup>64</sup> Yıldırım 2022, 14,17.

monuments related<sup>65</sup> to the expeditions of the Assyrian Empire, which was an important political power in the Iron Age Near East, to the Eastern Mediterranean are interpreted as indicators of the empire's desire to benefit from the raw material resources and passages in the region, to control the extensive trade network and to ensure the continuity of this trade in parallel with its western expansionist policy<sup>66</sup>. In fact, it should be noted that the annals of Tiglat-Pileser III of Assyria describe the Al Mina (Ahta) region in Samandağ as a 'commercial base'<sup>67</sup>.

Although palynological records indicate a partial increase in olive pollen rates in the Levant region in the early Iron Age, following the abrupt climate change in the Late Bronze Age<sup>68</sup>, there is also data indicating the existence of a tribal-style social organization in rural settlements and a parallel decrease in olive oil production and trade<sup>69</sup>. With the rise of centralized state organization and urban societies in the Iron Age II (c. 7th century BC), large olive oil production centers such as Ekron (Tel Maqni) under the Assyrian Empire, which had a potential to produce 1000 tons of olive oil per year, suggest that olive oil production and trade were quite advanced during this period<sup>70</sup>. Despite this, it is generally assumed that the striking developments in olive oil production in the Levant region, as indicated by the pollen records, took place during the Persian-Achaemenid Empire (c. 550 BC) and after<sup>71</sup>.

Data indicating the existence of olives in the Kuseyr Plateau and its immediate surroundings at least since the Bronze Age<sup>72</sup>, and olive oil workshops seen densely in rural settlements during the Roman Period<sup>73</sup>, show that the region is located in the Eastern Mediterranean olive cultivation ecological band, and also suggest that it was one of the products traded locally or interregionally during this long period.

### **Transfer of The Subject with the Same Approach in Terms of Historical Periods**

#### **Evidence of Ancient Olive Cultivation in Terms of Hatay**

Olive oil production and trade increased during the Roman Empire period and spread to very wide geographies. When we look at the settlements within the borders of Antioch and its territory and today's Hatay Province, it consists of plains, mountainous and hilly areas.

In the entire Hatay Province, in Antakya and its periphery, there are approximately 5 million trees on the "limestone hills/le massif calcaire", especially in the Altınözü district, Kuseyr Plateau, Yayladağı, Asi Delta, Samandağ, Harbiye-Daphne, Kırıkhan, Hassa and Erzin along the entire Mediterranean coastline (Fig. 3). When we look at the livelihoods of the people of Antakya during the Roman Period, the topography of the region facilitated the food needs of the people of Antakya<sup>74</sup>.

The olives and olive oil that the Romans produced, collected, sold and distributed, which they called the "Long Arm of Rome" that united Mare Nostrum in the Roman Empire, were a commodity

<sup>65</sup> Located within the borders of Çatbaşı neighbourhood in Kuseyr Plateau, Karabur Rock Monument is situated on an important route connecting the Mediterranean Sea and the Amik Plain. For detailed information on the rock relief, see Harmanşah 2014, 386-387.

<sup>66</sup> Yıldırım 2016, 713-714; Yıldırım 2019, 190-191.

<sup>67</sup> Yıldırım 2019, 191-192; Radner & Vacek 2020, 117.

<sup>68</sup> Finkelstein & Langgut 2018, 165, Fig. 2.

<sup>69</sup> Kaniewski et al. 2012, 893.

<sup>70</sup> van W Sebeepers 2006, 579, Kaniewski et al. 2012, 893; Finkelstein & Langgut 2018, 165.

<sup>71</sup> van W Sebeepers 2006, 579-580; Kaniewski et al. 2012, 893; Ali 2014, 328-330.

<sup>72</sup> Akar & Kara 2018b, 250-251.

<sup>73</sup> Pamir 2010, Fig. 19.

<sup>74</sup> Liebeschuetz 1972, 73.

that constituted a large part of the economy<sup>75</sup>. Tchalenko mentions that there were olive oil workshops, shops, boarding houses and markets around the hill or on the plain just below it<sup>76</sup>.

From Antakya, the region exported locally produced textiles, wine and olive oil. Olive oil and wine presses on the limestone hills prove that the region produced olive oil and wine intensively<sup>77</sup>. The most important activity that enriched Antioch and its countryside was the trade of olive cultivation, especially on the mountainous hills and limestone hills and in Erzin Leelik. We know from historical sources, especially from Libanius, that after olives, grapes and vegetables were grown<sup>78</sup>. For the Romans, Antiochia ad Orontes was an olive and olive oil production center with its suitable geography<sup>79</sup>. The city has a fertile inner region. Lake Amik and the navigable Orontes River allowed products to be transported by water<sup>80</sup>. Only olive oil and a little wine were produced on the limestone hills to the east of the city<sup>81</sup>. Therefore, it had a production economy that was not self-sufficient. The city has a fertile inner region, Lake Amik and the Orontes River, where water transportation was carried out, allowed products to be transported cheaply by water<sup>82</sup>. During the Roman Period, Antioch's territory expanded and olive oil was produced from the plains and the large part of the mountainous region. During the Byzantine Period, it formed many central points of attraction with religious importance, and being a strategic point for pilgrims going to Jerusalem was of course an element that increased the olive oil trade. It is revealed from inscriptions and archaeological remains that it produced significant amounts of olive oil in its churches and monasteries. Earthquakes, famines, and plagues that completely destroyed Antioch and its territory were also experienced during the Roman and Byzantine Periods, which disrupted Antioch's potential for development even more than it had been<sup>83</sup>. Earthquakes that occurred one after another at short intervals, plague epidemics, and the drought in 599 AD damaged the olive trees and disrupted rural life<sup>84</sup>.

Commercial amphoras show that mountainous Cilicia had two trade routes from the Iron Age to the end of Antiquity. From the Late Bronze Age to the end of the Iron Age to the Byzantine Period, many rural settlements have been identified in Antioch, its territorium<sup>85</sup>, Al-Mina<sup>86</sup>, Sabuniye Höyük<sup>87</sup>, Seleukeia Pieria, Alexandretta and the Asi Delta, Altınözü, Issos Plain<sup>88</sup>. There are findings and amphoras that show that the settlements listed here had international trade with Syria, Phoenicia, Cyprus, Greece-Mycenae<sup>89</sup>.

In the ancient period, the most intensive farm and olive oil workshop in the rural area of Antakya-Antiocheia, and today the most intensive olive cultivation is in the Altınözü district

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<sup>75</sup> De Giorgi 2010, 98.

<sup>76</sup> Tchalenko 1953a, 377-404.

<sup>77</sup> Vorderstrasse 2005, 30-31.

<sup>78</sup> Downey 1961, 22; Cassana 2004, 114.

<sup>79</sup> De Giorgi 2010, 98.

<sup>80</sup> Liebeschuetz 1972, 73.

<sup>81</sup> Liebeschuetz 1972, 74.

<sup>82</sup> Liebeschuetz 1972, 73.

<sup>83</sup> Kondoleon 2001.

<sup>84</sup> Foss 1997, 190-191.

<sup>85</sup> Autret et al. 2014, 593.

<sup>86</sup> Wooley 1938, 133-170.

<sup>87</sup> Yener et al. 2002, 294.

<sup>88</sup> Yener et al. 2002, 293-295.

<sup>89</sup> Yener et al. 2002, 293 vd.

(approximately 5 million olive trees). In Altınözü, there are agricultural terraces, ancient farm settlements, workshops-workshops, mounds in Hacı Bekir Farm<sup>90</sup>, Yocakaya<sup>91</sup>, Koz Castle, Tokaçlı, Tokdemir, Avuttepe, Hanyolu, Babatorun, Yunushanı Village, Yanıkkıpar, Seferli, Kansu, Toprakhisar<sup>92</sup>, Yarseli, Avsuyu. Especially in Yunushanı, Hanyolu settlements, there are workshop areas carved into the rock due to the rock formation.

In Kuseyr Plateau, there are olive oil workshops, olive oil crushing stones-trapetums, farmhouses, agricultural terraces, which show that olive cultivation and olive oil production capacity increased especially in Roman and Byzantine periods<sup>93</sup>. The rocky areas in the region were used as quarries, rock tombs, rock churches, chapels and olive oil workshops in different periods<sup>94</sup>.

There are also ancient workshops in Karamağara, which is connected to Şenköy and Yocakaya<sup>95</sup> Ayışığı villages in Yayladağı. It has been observed that these areas, especially those dating back to Roman and Late Antiquity, have hybrid rock-carved spaces and workshop vessels due to their rocky formations. Cold-pressed olive oil production continues today with ancient methods.

There are also many archaeological farm settlements belonging to Roman and Byzantine periods in Asi Delta<sup>96</sup>. The materials produced through Seleucia Pieria port reach the city via Orontes River transportation to Antiocheia. The port of Seleucia Pieria connected Antakya, whose level of prosperity increased during the Hellenistic and Roman Periods, to the Roman and Mediterranean World as the main port city of Antioch<sup>97</sup>. After the earthquake in the 6th century in Antioch destroyed the port of Seleucia Pieria, the port lost its importance and commercial activities stopped. In the 19th century, small ships docked at the outer port of Seleucia<sup>98</sup>.

Al-Mina Port was the port of Antalya for 500 years from the Iron Age, then the Byzantine, Islamic and Frankish periods. Many important events such as earthquakes, plagues, famines, migrations and invasions that affected Antakya also affected Al-Mina. Although Al-Mina was not the main port of Antioch, its location on the river shows that Antioch served as a port. It was a trade network that met the important needs of the Near East in the Mediterranean<sup>99</sup>.

All ports in Antioch receive products from Egypt, from Seleucia Pieria to Constantinople and from there to Italy, some travelers prefer the land route<sup>100</sup>. Large-capacity workshops and facilities where olive oil production is carried out are established near the important port cities of Seleucia Pieria<sup>101</sup> and Alexandratta. The reason for this is that it is easier and more economical to transport olive oil to market by sea trade<sup>102</sup> (Fig. 2). The records of Libanius of Antioch confirm the city's olive oil exports during this period.

From the Early Roman Empire (Pax Romana) until the end of the Late Antique Period, there was a plan that ensured the establishment and development of the olive oil industry. This plan covers the settlement texture in Antioch and its countryside. Roman veterans were settled in the Cilicia Region in the 2nd century AD after Trajan's Eastern campaigns, and evacuation premiums were effective for private investments in olive cultivation<sup>103</sup>.

<sup>90</sup> Pamir & İnanç 2012, 361 – 369.

<sup>91</sup> Pamir 2014b, 289.

<sup>92</sup> Akar & Kara 2018b, 250-251.

<sup>93</sup> Pamir 2019 et al., 215-234.

<sup>94</sup> Pamir 2014b, 289.

<sup>95</sup> Pamir 2014b, 289.

<sup>96</sup> Yener et al. 2002, 294-295.

<sup>97</sup> Pamir 2014a, 197.

<sup>98</sup> Pamir 2014a, 198.

<sup>99</sup> Vorderstrasse 2005, 30.

<sup>100</sup> Liebeschuetz 1972, 75.

<sup>101</sup> Yener et al. 2002, 294.

<sup>102</sup> Benzer durum Karia bölgesi için de geçerlidir, bkz. Diler 2004, 57.

<sup>103</sup> Giorgi 2010, 98.

Libanius suggests that Antioch hosted a comprehensive olive oil industry between the 1st and 4th centuries AD<sup>104</sup> and states that it was transported to overseas countries<sup>105</sup>.

Libanius mentions that olive fields in the Antioch territory were expanded with olives from the fourth century to the beginning of the sixth century, and that small villas, each with their own oil press, turned into large farms. The place of olive oil in the economic market was controlled in order to meet the city's regular olive needs. We know that the part of the population in Antioch that was interested in agriculture and farming was interested in finance and usury when they became rich from the goods they produced<sup>106</sup>. Workers engaged in olive cultivation; Landowners needed seasonal workers to do olive cultivation<sup>107</sup>. Instead of employing seasonal workers or villagers, landowners thought that it would be more advantageous to rent their lands and have the person they rented do this work<sup>108</sup>.

According to Libanius's reports, it supports the fact that there was a village structure dominated by free farmers<sup>109</sup>. We know that there were security forces and muhtars who provided local security in Antioch and its villages<sup>110</sup>.

The effect of the increase in olive plantations is emphasized in the increase of small-scale villages between the 4th century AD and the early 6th century AD. Libanius states that some large villages in the Antioch lands met each other's needs at fairs, and that producers generally did not come to the city and sold their products at local fairs.

There was a steady population growth and development through olive fields until the beginning of the 4th-6th centuries AD<sup>111</sup>. It is thought that the houses of property-owning peasants who made their living from olive cultivation were probably tenants of their ancestors' previously existing properties and that they turned new areas into olive groves in return for the ownership of their newly added lands<sup>112</sup>. For example, in the Cilicia Region, tomb inscriptions especially in the 5th and 6th centuries AD are found. It is understood that the tomb owners in the 10th centuries were involved in the production of oil and wine, and those who produced olive oil were called "elaiopolai"<sup>113</sup>.

With the departure of the Roman Empire from the region, the olive oil market decreased considerably. The region producing olive oil cannot be completely dependent on the army, and although it cannot be said that the development in the hill regions was only parallel to the presence of Roman soldiers, it can be said that the taxes collected from the soldiers contributed. The region exported locally produced textiles, wine and olive oil from Antakya. Olive oil and wine presses on the limestone hills prove that the region produced olive oil and wine intensively<sup>114</sup>.

In the early 6th century AD, Antakya began to decline due to earthquakes, floods and infectious diseases, and although no destruction is seen archaeologically with Persian and then Arab raids<sup>115</sup>, this is the reason why olive oil production in the villages decreased during this period.

We do not have much information about olive cultivation from the Byzantine Period to the Ottoman Period, our information about the Byzantine Period is known from Libanius's accounts.

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<sup>104</sup> Giorgi 2010, 99.

<sup>105</sup> Liebeschuetz 1972, 75.

<sup>106</sup> Liebeschuetz 1972, 64.

<sup>107</sup> Liebeschuetz 1972, 64.

<sup>108</sup> Liebeschuetz 1972, 64.

<sup>109</sup> Van Limbergen 2015, 179.

<sup>110</sup> Liebeschuetz 1972, 119.

<sup>111</sup> Tchalenko 1953a; 377-403, 91.

<sup>112</sup> Liebeschuetz 1972, 72.

<sup>113</sup> Iacomi 2010, 20.

<sup>114</sup> Vorderstrasse 2005, 30-31.

<sup>115</sup> Liebeschuetz 1972, 80; Tchalenko 1953a, 390.

During the Ottoman Period, olive oil produced in the Hatay Province on the Spice Road and the Hejaz Road was exported to the inner regions of Syria, Upper Mesopotamia, Iran and Europe<sup>116</sup>.

There is no information about olive oil consumption in the early periods of the Principalities and the Ottoman Period and it is a controversial issue. In the Early Ottoman Period, plain oil was preferred more<sup>117</sup>.

Until the 16th century, it was sufficient to meet the needs of the Istanbul province and the domestic market, but after the 16th century, production increased in the Aegean and Black Sea regions, and oil was sent to distant points of the Empire<sup>118</sup>. In the Ottoman Empire, the method of spreading olive cultivation and increasing production in the 19th century was the grafting of wild olive saplings, which was also applied in the vicinity of Antakya, in 1850, a 20-year tax-exempt olive privilege was provided to those who grafted wild olive trees, and in 1882, another privilege was issued and exemption from the tithe tax for 5 years was provided<sup>119</sup>. With the increase in the railway network at the end of the Ottoman Period, olive oil became an important commercial product with the globalizing market in 1890 and after. II. During the Mahmud Period, a directorate was established to control olive oil and soap production<sup>120</sup>.

As it is today<sup>121</sup>, in ancient times, Kuseyr Plateau was the region where olive cultivation was most intensively carried out. It is known that Kuseyrs, one of the important landowners of the Ottoman Period, produced olive oil and soap for approximately 180 years<sup>122</sup>. During the Ottoman Period, olive cultivation and olive oil production were carried out in the Ma'sara olive oil workshops, Altınöz, Kuseyr, Şuğur, Cebel-i Akra districts<sup>123</sup>. In the detailed cadastral records, it is stated that 3,949 trees were planted in Antakya in 1550 and the lands of the foundations planted with olives are called giras and mills are registered<sup>124</sup>.

### **Ethnoarchaeologically, Current Olive Cultivation Activities in Hatay Tokaçlı Village**

#### **Ethnographic Data on Olive Cultivation and Culture in Tokaçlı**

Tokaçlı (Cüneydo) Village, affiliated to Altınöz district of Hatay, is located approximately 3 km south of the district. In the Aleppo Land Registry Registers between 1526-1806, Tokaçlı was mentioned as Cundi/Cneydo (heaven, soldier in Arabic)<sup>125</sup> (Fig. 4). In 1940, it was renamed Yonta<sup>126</sup>. In 1977, it was renamed Mermeris<sup>127</sup>. It is known that the Tokaçlı population, consisting of Turkish citizens of Arab origin and Orthodox Christian faith, lived in this region as an autochthonous community; after Hatay was annexed to the Republic of Turkey in 1939, the name of the settlement, which was previously Cneydo, changed to Tokaçlı over time.

The location of Tokaçlı, Altınöz's mild Mediterranean climate, and the winds coming from the V-shaped valleys, which are cool in the evenings due to its mountainous topography, provide the most suitable climate for olives to grow in the most suitable conditions. While olives ripen in Antakya in October-November, they ripen in Altınöz in November-December. The reason why Altınöz is

<sup>116</sup> Ateş 2022, 43, 65.

<sup>117</sup> Ateş 2022, 55.

<sup>118</sup> Ateş 2022, 58.

<sup>119</sup> Ateş 2022, 57.

<sup>120</sup> Ateş 2022, 60.

<sup>121</sup> <https://bilgeagacdergisi.com/sirket-haberleri/kuseyri/> (access date: 24.05.2023).

<sup>122</sup> <https://bilgeagacdergisi.com/sirket-haberleri/kuseyri/> (access date: 24.05.2023).

<sup>123</sup> Gündüz 2009, 66-136.

<sup>124</sup> Ateş 2022, 66.

<sup>125</sup> Nişanyan 2023, 350.

<sup>126</sup> Published on "Republic of Türkiye Resmi Gazete".

<sup>127</sup> 1:100.000 ölçekli Sovyet askeri haritaları, Türkiye (en geç 1977), Bkz. Kaynak: <https://www.nisanyanyeradlari.com/?y=Yonta&ul=Hepsi&o=c&s=1>. (access date: 12 Ağustos 2024).



the region where olive cultivation is carried out intensively and where high-quality olives are found in Hatay is the suitable climate stated by Plinius in his *Naturalis Historia* book.

Almost all of the population of Tokalı, approximately 512 people, are engaged in olive cultivation, and 30% of the population is young (Fig. 5). Since 1960, there has been migration to Germany and after 1980, many parts of the world have migrated. The main source of income of the village is olive cultivation and olive oil production, but tobacco farming was also carried out in the region until 2000. The ilingir family has investments related to olive oil production in Tokalı Village.

In Tokalı, in addition to a facility that produces olive oil using modern methods, there is also a traditional mill called “su zeyti” that uses ancient olive oil production techniques in many ways. It is known that the village also had an olive oil facility during the Ottoman Period. The olive oil production equipment belonging to this facility is exhibited in the Olive Museum in the village<sup>128</sup>.

There are three basic stages in traditional olive oil production in Tokalı: Collection, crushing-crushing and oil separation (Fig. 6). Olives are beaten with thin and long wooden sticks, and if necessary, by climbing a wooden ladder (Fig. 7). The olives that break off the branch are collected on a tarpaulin spread out wide under the tree. The olives filled into sacks are immediately transported to the area where the mill is located.

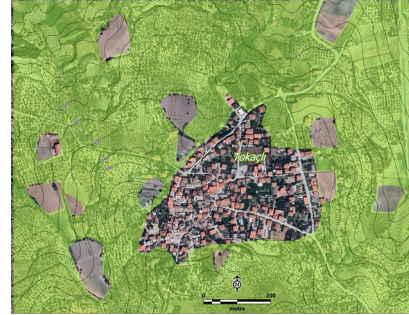


Fig. 5. Olive Areas, Aerial Photo (Google Earth M. imek 2024).



Fig. 6. Water olive production with the ancient Molea Olea system (Photo: B. zdilek).



Fig. 7. Olive harvest from ancient times to the present day (Photo: B. zdilek).

These olive mills, called masara in the common courtyards of the houses in the center of Tokalı Village<sup>129</sup>, consist of a circular crushing basin rising from the ground at the bottom, 20 cm deep inside, and a crushing stone that moves inside this basin (Fig.6, Fig. 8). In the center of the basin, there is a shaft socket in the middle of a protrusion raised 15 cm from the base (Fig. 9). The crushing

<sup>128</sup> The ancient olive grove-olive museum was damaged in the February 6, 2023 earthquake: <https://t24.com.tr/foto-haber/hatay-daki-zeytin-ve-zeytinyagi-muzesi-depremlerde-hasar-gordu,21928> (access date: 20.04.2024).

<sup>129</sup> During the Ottoman Period, the olive oil crushing level was called mill or vice, while especially in the Southeastern Anatolia Region, Hatay, Syria and Palestine, it was called masara.

stone, which is carved independently from basalt in the shape of a wheel and is locally called ding<sup>130</sup>, is connected to the bottom trough in the middle vertically with a shaft system. The shaft passing through the middle of this crushing stone extends outwards and is connected with ropes to the horse's harness that moves the crushing stone, which rotates around the mill, on the trough in a circular direction.



Fig. 8. Ethnoarchaeological practices in olive oil production in Tokaçlı Village -Altınöz (Photo: B. Özdilek)



Fig. 9. Ethnoarchaeological practices in olive oil production in Tokaçlı Village -Altınöz (Photo: B. Özdilek).

The collected olives are poured from the sacks into the mill basin. They are spread into the basin with the help of a shovel and directed under the crushing stone at intervals. In this way, the flesh of the olive is separated from its seed and the two are crushed together to some extent and broken into pieces. Then, the crushed olive pulp is taken from the basin and carried to the oil separation section set up next to the mill and poured into the pool. It is kneaded well in the pool and then hot water is poured over the pulp, thus separating the seed from the edible part of the olive (Fig. 10). The seed is taken to a separate place to be converted into a kind of fuel called “pomace”. Hot water is added to the remaining part again and passed through a sieve. Thus, the edible part of the olive remains on the sieve and is completely separated. The olive oil and the water of the olive accumulate in the pool. The olive oil, which is lighter than water, is taken by hand and placed in canisters. The water in the olive oil, which is left to rest for a while, settles to the bottom (Fig. 11). Thus, pure olive oil is obtained.



Fig. 10. Separation of olive pulp and oil (Photo: H. O. Tıbikoğlu)



Fig. 11. Olive oil production with water olive technique (Photo: H. O. Tıbikoğlu)

<sup>130</sup> Ateş 2022, 61. During the Ottoman Period, olive oil mills were called dings and were turned by the power of donkeys or horses.



The olive oil produced by members of the same family, accompanied by Arabic songs, using ancient methods, is first offered to the family for consumption, and the surplus product is offered to the market for trade upon special order. The acid level of the olive oil produced is quite low. Since the production of water olives is very laborious, halva is served to those who will participate in the collective work and support the production. The first olive oil is eaten with hot tandır bread from the tandır, accompanied by prayers, and a pilaf called biberli aş is made with the first olive oil. It is known that the nutritional value of the first olive oil is equal to breast milk<sup>131</sup>. In addition to the olive mill still actively used in the village square, there are also screw press olive workshops mentioned by Cato in the Ottoman period olive mill.

In Hatay cuisine; the use of olives is quite common apart from the consumption of olive oil. “Olive salad”, pickled olives, sometimes hal-halı type appetizers are served as appetizers outside of breakfast, olive oil is poured over zaatar at breakfast, zaatar salad is consumed with olives and olive oil, in short, the most used product of Hatay cuisine is olives and olive oil, all dishes are cooked with olive oil, olive oil is used in appetizers. Hal-halı olive is the most common type of olives specific to Hatay (Fig. 12).

#### Tradition, Ritual And Olive in Tokaçlı

The olive oil production and religious traditions of Tokaçlı village carry the cultural characteristics that have continued from ancient times. It is observed that similar cultural elements in the geography of the region are still maintained in the production of olive oil. One of the reasons for this is that olives have an important place in Christianity in terms of religion, following Paganism (Fig. 13).

All of the people of Tokaçlı Village are Arab Christians, and the villagers are affiliated with the Greek Orthodox Patriarchate of Antakya, whose center is in Damascus (Fig. 14). There is a Maria Ana Church in Tokaçlı, which is approximately 600 years old (Fig. 15). The church was demolished on February 6, 2023, leaving only the bell tower, and the villagers believe that the church collapsed after carrying all the burden of the village.



Fig. 12. Antakya olive varieties, the most famous of which is Halhali (Photo: B. Öz-dilek)

<sup>131</sup> Uğurlu & Uğurlu 2023, 257.



Fig. 13. Religious ceremonies celebrated with the sacred olive branch in Christianity (Photo: Cneydo ve Gurbetçileri <https://www.facebook.com/search/top?q=cneydo%20ve%20gurbetçileri>, access date: June 2024)



Fig. 14. The Importance of Olives in Religious Ceremonies in Christianity (Photo: Cneydo ve Gurbetçileri <https://www.facebook.com/search/top?q=cneydo%20ve%20gurbetçileri> access date: June 2024)

Olives have been considered sacred throughout the ages, as they have an important added value in human life. The olive tree and its fruit are considered sacred in Paganism, Judaism, Christianity and Islam. Pagans and Christians have liturgical oil containers, unguentarium and ampullae<sup>132</sup>. In Christianity, olive oil is anointed in consecration ceremonies. First Bible/Book of Judges Chapter 9:8: Trees resort to olive trees to choose a king for themselves, they do not want to give up the olive oil praised by God and man and refuse to be king. It is known that pilgrims carry ampullae full of olive oil and become pilgrims.

The Mount of Olives in Jerusalem and the blessed olive are mentioned in three heavenly religions<sup>133</sup>. In the Torah-Psalms 52:8, the phrase "David; but I am like a green olive tree in the house of God. I trust in the grace of God forever and ever." is used. In the paganism and Greek culture, which Western Civilization considers to be their

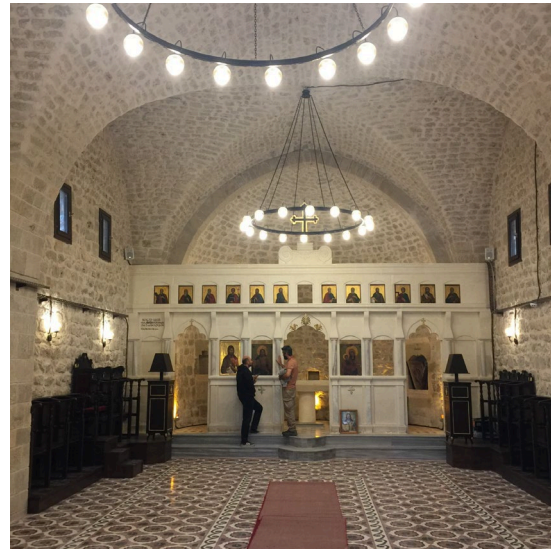


Fig. 15. Tokaqlı Church before the earthquake, its first state after the restoration (Photo: B. Özdilek)

<sup>132</sup> Özdilek 2016, 221, 222-224.

<sup>133</sup> Öztürk 2009, 1019.



ancestor, in the selection of the protective god of the City of Athens, Athena wins the race with the olive tree against Poseidon's gift of salt water<sup>134</sup>.

In the Mori Hanna visiting place of Tokaçlı Village, lamps are lit with prayers, linen cloths are dipped into the olive oil they put in bowls, candles made from the burning linen cloth are lit, incense/incense is burned. After the religious ritual gratitude prayers, the traditional meal made with olive oil, locally called tabule, also known as kısır/sarma, is eaten with olives and vine leaves in a clay basin. There are small naiskos in many places in the village where wishes are made (Fig. 16, Fig. 17). This tradition dates back to the Roman Period and incense and candles are burned in these areas. Today's Olive Museum, there is also a sacred naiskos in front of the oil mill of the Ottoman Period (Fig. 17). These naiskos are definitely areas where prayers are made to the God associated with the abundance of olives and olive oil.

In funeral ceremonies, a wreath of flowers and olive branches is placed next to the photographs of the deceased and bread is offered to those who come to the funerals (Fig. 18). In Tokaçlı and Antakya, the Branch Feast (Şanini) is celebrated on the Sunday before Easter, the entry of Jesus into Jerusalem. It is reported that in the religious event, Christians gather palm branches or olive branches on the Mount of Olives in the afternoon and go to Jerusalem with a procession<sup>135</sup>. In the religious ritual, a large cluster of palms and olive branches consisting of small branches are brought to homes 1-2 days before the ceremony and decorated with fragrant flowers such as roses, carnations and gillyflowers<sup>136</sup> (Fig. 19).



Fig. 17. Olive incense is burned in the naiskos in the olive museum garden Photo: B. Özdilek).



Fig. 18. Sacred foods and olive prayers at funerals (Photo: Cneydo ve Gurbetçileri <https://www.facebook.com/se-arch/top?q=cneydo%20ve%20gurbetçileri> access date: June 2024)



Fig. 19. Palm and olive branch Christian holiday celebration (Photo: Cneydo ve Gurbetçileri <https://www.facebook.com/se-arch/top?q=cneydo%20ve%20gurbetçileri> access date: June 2024)

Another belief in Hatay is the Kiddes Feast in Nusayrism; “Kiddês means to consider sacred, to pray, to glorify, to thank God. Nuseyris, Arab Alawites, visit from the early hours of the day until midnight. The holiday celebrated as Kiddes by the Nusayris is the baptism ceremony in Christianity. In the

<sup>134</sup> Powell 2018, 177.

<sup>135</sup> Adam 1981, 107-111.

<sup>136</sup> Sert 2021.

Nusayris, the holiday that starts in the family (like the godfather in Christianity) is visited by the spiritual parents and their hands are kissed and all acquaintances and family members are included in these visits in order. Olive branches and branches from blueberry (basil) plants, which are symbols of peace, are taken and hung in homes and workplaces. Arab Alevis living in the Hatay-Antakya-Mersin region make kreykuşat and sarı burma desserts, Hıbz Kiddes (Kiddes Bread) specially for the Kiddes (Ğıyd el Kıddas) holiday and offer them to their guests on the holiday. Kiddes nut-pita (İğyd El Kiddes) is made on the day of Kiddes, water and olives or basil branches are put in a bowl on the night of Kiddes and the hair is combed with that water in the morning.

The use of olive oil in Hatay folk culture, in folk medicine; in Hatay, olive oil and onion peel are boiled and used for ear infections. In case of stomachache, olive oil is rubbed on the abdomen. Babies are lubricated with olive oil when they are born and the hands and feet of the dead are lubricated with olive oil. In dental treatment, olive oil is gargled to clean bacteria in the mouth. Its use as fuel; In Hatay, especially in districts and villages where olive oil production is intense, pomace fuel is produced from the pulp and pulp of olives. The pomace factory is located in Antakya. Mineral and organic fertilizers are made from olives<sup>137</sup>. Cattle feed is made from the branches and leaves of olives. Olive oil is used in seafaring, sailing, and lubricating the parts of ships<sup>138</sup>. Olive oil is used to lubricate wool in weaving and spinning<sup>139</sup>. In rituals and folk culture from the past to the present; In the story related to the olive being a symbol of fertility, it is believed that the olive taken out of the house in the evening will take away the fertility of the house.

### General Evaluation

From the Bronze Age to the present, the fertility of the lands we call Hatay today has made life here continuous and rich. One of the most important agricultural products that made this environment of prosperity possible was the olive. In addition to many archaeological and epigraphic data on olive cultivation and trade, ancient written documents shed light on the subject.



Fig. 20a. Molea Oleas in the Olive Museum of Tokaçlı Town (Photos: B. Özdilek)



Fig. 20b. Tokaçlı Olive Museum (Photos: B. Özdilek)

<sup>137</sup> Ateş 2022, 52.

<sup>138</sup> Ateş 2022, 52; Boynudelik & Boynudelik 2008, 128.

<sup>139</sup> Boynudelik & Boynudelik 2008, 128.





Fig. 20c. Molea olea-ethnoarchaeological practices in the village square ((Photo: Cneydo ve Gurbetileri <https://www.facebook.com/search/top?q=cneydo%20ve%20gurbetileri> access date: June 2024)



Fig. 20d. Religious ceremonies in olive groves after the collapse of the church after the earthquake (Photo: Cneydo ve Gurbetileri <https://www.facebook.com/search/top?q=cneydo%20ve%20gurbetileri> access date: June 2023)

Recent archaeological and epigraphic research in Hatay has shown that data on olive oil production in the region dates back to the Bronze Age. Equipment such as crushing vats, millstones, press beds, weight stones and collection containers used in olive oil production date back to the Roman and Byzantine periods, parallel to the scope of research on this subject (Fig. 20a, Fig. 20b). In the historical geography covering Hatay and its immediate surroundings, especially in the Roman and Byzantine periods, the economic policies of the central administrations, with their administrative regulations that directed the effect of the increasing population on consumption and production, ensured the establishment of many agricultural production areas in which olive cultivation was an important part. Olive oil production was organized with agricultural production settlements established generally in the rural areas around Antiocheia. In addition to domestic consumption, olive oil, which maintained the economic balance as an important commercial commodity, was exported to various parts of the ancient world via important land-sea routes passing through the region.

The best way to understand ancient olive cultivation in Hatay in the light of archaeological findings and ancient texts based on material culture has been this ethno-archaeological study (Fig. 10c). We know that ethnographic data is used in archaeology to understand the social and cultural structure of a society. With this ethno-archaeological study, we aimed to explain the functionally continuing culture and the material remains of any culture or cultures archaeologically or the result of human behavior in the formation of material culture. In order to understand ancient olive oil production, ethno-archaeological studies are useful in order to follow all stages and understand the production equipment, tools and equipment, and mechanism. It is important to raise awareness with such studies before olive oil produced with traditional methods soon completely surrenders itself to industry. By examining olive oil production in Hatay from ancient times to the present, it will

shed light on the socio-economic organizations, material cultures, religious and ritual symbols, material cultures and human behaviours of societies that lived in the past, as defined by Yakar<sup>140</sup>. The most commonly used method in ethnoarchaeology is production<sup>141</sup>. In ethnoarchaeological studies, it focuses on findings and tries to understand how material culture is formed and its continuity. In particular, there should be studies on olive species specific to the region, ancient seeds and still living wild olive species to keep the plantation alive.

Adnan Diler, who conducted an ethnoarchaeological study in the Caria Region, stated that there was no reason for small-scale producers in rural areas to intensify production by adopting newly developed industrial technologies that would require a large capital expenditure<sup>142</sup>.

It is seen that regional production traditions are still alive in Hatay, which includes technological differences from ancient times to the present (Fig. 20c). The reason why Hatay has preserved its deeply attached traditions and religious beliefs to the present day is its commitment to its roots, knowing the value of its history, culture and beliefs. Due to these characteristics, it has managed to survive with its culture and values against earthquakes and disasters throughout the ages. People from Hatay are devoted to their homeland, traditions, beliefs and history.

There are many legends and lived stories about olives in Hatay folklore. The olive tree carries vital and religious meanings in all cultures, but in Hatay, it is seen as a living being beyond its sacredness and blessing, and pruning the tree is considered as cutting the hair, the reason is the foundations of animism belief<sup>143</sup> (Fig. 20d). If the olive tree does not produce enough, they hit the flowering trunk with an axe, the tree, thinking it will die, produces more fruit the next season to continue its lineage.

In ancient times, production-oriented planning was made in Hatay, especially in the Roman Period, and today; Turkey needs to have a global policy, especially on marketing and olive oil. The country that has achieved this best from ancient times to the present is Greece. The region in Anatolia that provides the best economic profit and marketing-promotion of olive cultivation is the Aegean Region Ionia-Caria. Although Hatay province is an important region in this regard with its olive variety, production capacity and the survival of traditional methods, it is quite deficient in these aspects.

## Conclusion

Hatay province has been the center of many civilizations throughout history with its fertile soils and cultural diversity, and has played an important role in olive cultivation and olive oil production. The ethnoarchaeological investigations carried out within the scope of this study reveal the continuity and transformation of olive and olive oil production from the Prehistoric Period to the present day. The combination of archaeological data and ethnographic observations shows that there is a direct relationship between the production techniques used in the past and contemporary practices.

The field studies carried out in the Tokaçlı Village revealed that traditional forms of production were not only economic but also intertwined with socio-cultural and ritual practices. The sacredness of the olive tree throughout history has deepened the meanings attributed to olive cultivation by the people of the region. This shows that olives are not only an agricultural product but also a part of social memory and local identity.

However, Hatay's olive cultivation potential is underutilized when compared to other regions such as the Aegean Region, which has branded olive production. Preserving traditional methods and

<sup>140</sup> Yakar 2004, 7-14.

<sup>141</sup> Akkuş & Karakoç 2021, 13.

<sup>142</sup> Diler 2004, 56.

<sup>143</sup> Uğurlu & Uğurlu 2023, 244-245.



supporting them with modern production and marketing strategies will both contribute to the local economy and ensure the sustainability of cultural heritage.

In conclusion, olive and olive oil production is not only an agricultural activity in Hatay, but also an expression of a cultural heritage thousands of years old. The findings of this study demonstrate the importance of combining archaeology and ethnography in understanding the links between the past and the present. Future similar studies will contribute to a deeper understanding of the historical and cultural dimensions of olive cultivation in Hatay.

This study compiles the publications and research on ancient olive cultivation in the region and presents a comprehensive overview of the region. It also reveals the sanctity attributed to olives and the continuity of traditional production methods in the context of the historical and cultural richness of the Levant. In this common cultural ground where different religions, beliefs and cultures have coexisted for centuries, the symbolic and economic value of olives is emphasized; in this context, the study makes an important contribution to the literature by being the first ethno-archaeological research on olives in Hatay.

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