

# Home Garden Herbs and Medicinal Plants of Lefke, Cyprus

Mariam Gökçebağ<sup>1</sup>, Özge Özden<sup>2\*</sup>

<sup>1</sup>Pir Pasa Sokak, no 33, Lefke, North Cyprus, TURKEY.

<sup>2</sup>Department of Landscape Architecture, Faculty of Architecture, Near East University, Nicosia, North Cyprus, TURKEY.

## ABSTRACT

The objective of this study was to record edible herbs and fruits derived from home gardens in Lefke, Cyprus and in addition to determine the local residents' knowledge of medicinal uses of home growing plants within their home gardens. This study was performed in old Turkish Cypriot town Lefke, Cyprus. During the surveys between November 2016 and February 2017 the fruit and edible herb production was documented and standard interviews were performed with garden owners. A total number of nine herb and 20 fruit tree species were determined during the surveys. The most widely used herb was mint (*Menhta spicata* L.) followed by Origanum (*Origanum majorona* L.). Almost all home garden owners were aware of the health benefits of mint. The most widely used fruits were lemons (*Citrus x limon*) and oranges (*Citrus x aurantium*). The residents were aware of the Vitamin C content and health benefits of these fruits. However, almost all recorded fruit species were used for culinary purposes rather than their medicinal uses. Through this research, the role of Cypriot home gardens for traditionally grown herb and fruit plants and their effect on cultural-ecological socialization as well as their health benefits were determined.

**Key words:** Herbs, Medicinal, Traditional, Home Gardens, Rural, Cyprus.

## INTRODUCTION

Mediterranean region landscapes resulted from the multifarious and primeval interaction of ecosystems and societies.<sup>1,2</sup> It is known that Mediterranean region is among the richest regions in the world for wild and cultivated plant species.<sup>3</sup> The rural landscape is a mosaic of natural and human shaped land uses which vary in size and arrangement.<sup>4</sup> In rural areas home gardens have a great value in herb and medicinal plants. They are multispecies mixed agroecosystems.<sup>5</sup> The term "home garden" refers to the traditional land use practices around a living house where several species of plants are planted and maintained by the members of the household which their products mainly consumed by house owners.<sup>6</sup> It is known that home growing herbs and medicinal plants are socio-culturally important values for local communities.<sup>7,8</sup> Particularly herbs

and their use may be found in Chinese documents from as far as 3000 BC and it is also important to underline that, herbs and spices have been gaining popularity since the end of World War II. It has becoming a hobby for many people not only to cook, but also grow them in home gardens for other uses.<sup>9</sup> Cyprus lies at the eastern end of Mediterranean Basin, it is the third largest island of the Mediterranean Sea.<sup>10</sup> It covers an area of 9,251 km<sup>2</sup> and it is consisting of three geomorphological zones, the Troodos mountains, the Five Fingers Mountain range and Mesoaral plain which separates the two upland areas. Cyprus has a very diverse flora within the region. According to floristic surveys, there are around 2000 native and alien plant species, subspecies, varieties, forms and hybrids exists on the island.<sup>11,12,13</sup> Although there are various

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**Correspondence:**

**Özge Özden,**

Department of Landscape Architecture, Faculty of Architecture, Near East University, Nicosia, north CYPRUS.

Phone no: 0090 392 680 2000

Email Id : ozge.fuller@neu.edu.tr



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ethnobotanical researches has been carried out on the island, research and documentation work on home gardens growing edible and medicinal plants are very limited.<sup>15,16,17</sup> According to Lardons and Heinrich (2013)<sup>14</sup> medicinal uses of plants goes back to Ottoman period (1571-1878) which some of the local monasteries had dedicated places for the nursing of sick. In rural areas, Cypriot home gardens may occupy different positions such as the backyards, front-yards, site-yards and courtyards which have variable shapes, sizes and composition of plant species. They are mainly harboring supplementary fruits, vegetables and herbs for households.<sup>17</sup> Home gardens in Cyprus are currently facing different threats mainly loss of interest on traditional gardening, loss of traditional knowledge on medicinal use of herbs and fruits. The objective of this study was to record edible herbs and fruits derived from home gardens in Lefke, Cyprus and in addition to determine the local residents' knowledge of medicinal uses of home growing plants within their home gardens.

## MATERIAL AND METHOD

### Study Area

The study was performed in Lefke town in Cyprus, which is situated north-west part of the island and overlooking Morphou Bay. The old name of the town was 'Lefka'. According to 2011 census the population of Lefke town was 3409 inhabitants.<sup>18</sup> Lefke contains numerous historical houses that are in the Cypriot-Ottoman architectural style. Most of these houses were built between 1900 and 1930. These historical houses have inner courtyards, reflecting the conservative, closed Islamic family life of the early 20<sup>th</sup> century. Also Lefke has been historically important a copper mining town for Cyprus. It is known with citrus trees, walnut trees and ancient palm trees. Houses are surrounded by agro ecosystems and different variety of fruits trees.

### Climate

Cyprus has a Mediterranean climate with hot dry summers and warm-rainy winters. Summer normally lasts from June to September and winter from November to March. The rainfalls mainly between October to March. In Lefke region the highest temperature in winter was 21.3°C and the lowest temperature was 4.7°C according to meteorology station records of 2012-2013.<sup>17</sup>

### Data collection

Observation of home gardens and structured interviews of garden owners are the primary sources of data in this study. During the surveys in November 2016 - February 2017 a total number of 20 home gardens were visited and the fruit and edible herb production was documented. All fruit producing trees, shrubs and also herbs of the surveyed home gardens are identified and recorded to species level. While standard interviews were performed, participants provided permission to photograph and to collect some plant samples for identification. The questionnaire was mainly focused on home garden components and knowledge of culinary use and medicinal value of herbs and fruits that are cultivated by home owners in Lefke.

## RESULTS

Traditional home gardens which were visited during the surveys were between the size of 40 m<sup>2</sup> to max 250 m<sup>2</sup> and they all had mixed cropping system which means mixture of herbs, ornamentals and fruit trees. A total number of nine herb and 20 fruit tree species were determined during the surveys. The most widely used herb was mint (*Mentha spicata* L.) followed by Origanum (*Origanum majorana* L.). Most of the determined herb species were consumed by the home owners for their medicinal value and as a spice in the kitchen (Table 1). According to survey results 60% of the garden owners

**Table 1: List of recorded herbs during the surveys and their use**

Species Name	English Name	Family Name	Use
<i>Petroselinum crispum</i>	Parsley	Apiaceae	Food
<i>Coriandrum sativum</i> L.	Coriander	Apiaceae	Food
<i>Lavandula angustifolia</i> Mill.	Lavender	Lamiaceae	Medicinal, Food, Ornamental
<i>Mentha spicata</i> L.	Mint	Lamiaceae	Medicinal, Food, Ornamental
<i>Ocimum basilicum</i> L.	Basil	Lamiaceae	Medicinal, Food, Ornamental
<i>Origanum majorana</i> L.	Marjoram	Lamiaceae	Medicinal, Food, Ornamental
<i>Foeniculum vulgare</i>	Fennel	Apiaceae	Medicinal, Food
<i>Rosemarinus officinalis</i>	Rosemary	Lamiaceae	Medicinal, Food
<i>Melissa officinalis</i>	Lemon Balm	Lamiaceae	Medicinal

were aware of the health benefits of the mint. Almost all home garden owners were aware of the health benefits of mint. They stated that they are using mint for treatment of digestion, irritable bowel syndrome and period pain treatment. Also, the home owners mentioned that they are using dried or green oregano for the treatment of coughing and chest infection. The most widely used fruits were lemons (*Citrus x limon*) and oranges (*Citrus x aurantium*). The residents were aware of the Vitamin C content and health benefits of these fruits. Survey results indicated that 65% of the home owners were using lemon for its health benefits. Most of the home owners were using lemon for cold treatment and balancing blood pressure. Also, they emphasised that, most of the Lefke residents consuming walnut for brain functioning. In general, most of the interviewers emphasised the fact that fruits are rich vitamin and mineral resources. However, almost all recorded fruit species were used for culinary purposes rather than their medicinal uses.

## CONCLUSION

Traditional knowledge of growing herbs has significant positive effects for human well-being and also playing an active role in biodiversity conservation within the rural areas.<sup>8,12</sup> It is crucial to understand the medical traditions in order to create sustainable living environment. Through this research, the role of Cypriot home gardens for traditionally grown herb and fruit plants and their effect on cultural-ecological socialization as well as their health benefits were determined. The pattern of traditional use of edible plants for medicinal value has been decline, but this research has shown that traditional use of edible plants in home gardens for medicinal and kitchen use purposes still alive in Lefke and knowledge has been shared between older and younger generations. In addition, this study concludes the botanical richness of home gardens in Cyprus, particularly the richness of edible plants. Home gardens are important sites for in-situ conservation of local edible plant species, therefore it should be investigated and conserved.

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## CONFLICT OF INTEREST

None

## ABBREVIATION USED

km: kilometre; BC: Before Christ; °C: Centigrade.

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### PICTORIAL ABSTRACT



### SUMMARY

- Record edible herbs and fruits derived from home gardens in Lefke, Cyprus
- A total number of nine herb and twenty fruit tree species were determined.
- Most used herb was mint and origanum.
- The most widely used fruits were lemons and oranges.
- Most fruits were grown for culinary purposes.

### ABOUT AUTHORS



**Mariam Gokcebag** is a Herbalist, specializing in medicinal herbs. She has attended many workshops and given seminars, She has wide variety of herbs within her own garden if Lefke, She is the author of a book called 'Healthy Living in Cyprus'.



**Assoc. Prof. Dr. Ozge Ozden** is an ecologist who studied a PhD at Exeter University on the subject of `Biodiversity`. She has published many scientific papers related to the subject of `biodiversity of Cyprus`. Currently she has interest on biodiversity of traditional home gardens in Cypriot rural landscapes. She is Head of Department of Landscape Architecture at Near East University, Cyprus.

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