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Agricultural University of Tirana, Kodër-Kamëz, Tirana

PROCEEDINGS



**The 5th International Conference
on Agriculture and Life Sciences of Albania 2030**

Tirana, 3-5 November 2025

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PROCEEDINGS OF INTERNATIONAL CONFERENCE ON AGRICULTURE AND LIFE SCIENCES OF ALBANIA 2030 (ICOALS 5)

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PLANTS THAT GROW NATURALLY IN ALBANIA, THEIR USES AND GEOGRAPHICAL DISTRIBUTION

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ABSTRACT

Albania has a rich tradition in the use of wild plants, like medicinal herbs and culinary. The Mediterranean region is home to a wide variety of such plants, and their use is widespread. In the present study, we aimed to analyze the plants that grow naturally in our country and their geographical distribution. We observed that these plants are distributed throughout the country, with higher prevalence in the northern region, followed by the southern areas of Albania, and less in the central part. Another aspect of the study was to identify the functional uses of these plants, where their medicinal properties are predominant. For example, mountain tea (*Sideritis* spp.) is primarily used in the form of aqueous extracts due to its positive effects on immunity. Additionally, Oregano (*Thymus vulgaris*) is mainly used in culinary. Further suggestions include analyzing the chemical composition of these plants and their potential for export.

Keywords: *Culinary species, Wild medicinal plants, Aromatic plant species, Rural and mountainous regions, Traditional plant use, Medicinal and aromatic plant*

INTRODUCTION

Numerous studies have demonstrated that certain regions around the world including Albania still maintain naturally growing vegetation with a wide range of uses, particularly in the fields of aromatic, medicinal, and culinary plants [1,3,7].

This can be attributed to several factors: the complex biocultural dynamics of these regions, characterized by significant ethnic and religious diversity [2,12]; the socio-economic conditions of recent decades, which have slowed development processes [6,12]; local traditions, as in many regions, the practice of collecting wild plants is not commonly observed [5,7]. Cultural heritage have also a great role in methods of using plants mostly as tea or in culinary traditions for their aroma, taste, medicinal properties [4,7].

In recent years, Albania has witnessed increased activity and initiatives aimed at the collection and preservation of various native wild plant species. Approximately 15% of the country known plant species possess medicinal, aromatic, or culinary properties, positioning Albania as a country with considerable potential in the agro-business sector. A substantial proportion of these plant-based products are cultivated, processed, and exported. It is estimated that about 90% of production is destined for export, representing approximately 20% of the country's total agricultural exports. The most prominent regions in this sector include the mountainous northern areas, such as Malësi e Madhe, Kukës, Kolonjë, and Librazhd [3,6,8].

MATERIAL AND METHODS

This study is based on research from scientific literature, journals, and other reliable sources as institutions FAO, Ministry of Agriculture and Rural Development, EUNIS etc. Data were collected and analysed to identify the geographical distribution of natural plants in Albania and their main uses [1,3,5]. The purpose of this research is to examine the distribution across the country of plants that grow naturally and have potential for incorporation into the human diet. The data in this study were collected from online research, journals, and previous scientific studies.

During the research, a geographical distribution of these plants was observed throughout Albania, but especially in areas such as Malësia e Madhe (62%), Kukës (49%), followed by Kolonjë (41%) and Librazhd (39%), with approximately 20,000 residents employed in these areas — showing the economic factor in regions with a growing trend since 2010 [6,8]. We can also distinguish and classify them by region — for example, Northern Albania is known for oregano and thyme, Central Albania for similar species, and Korçë and Gjirokastër for mountain tea (USAID, 2010). An increase has been observed in the production of essential oils from nettle, bay leaves, sage, and black juniper [3,6].

RESULTS AND DISCUSSIONS

We can see plants in different regions as shown in Table 1, north Albania mostly are mountains, the centre of Albania including rivers also, south region and coast.

Table 1. Geographic Distribution of Natural Plants in Albania. This table summarizes the dominant plant species in different regions, their habitats/elevations, and special ecological or medicinal features [1,3,4,5,13,14,15].

Region	Habitat / Elevation	Dominant Plants	Notes / Special Features
Northern Albania (Alps / Accursed Mountains)	Forests (1,000–2,000 m)	<i>Fagus sylvatica</i> (European beech), <i>Abies alba</i> (silver fir), <i>Picea abies</i> (Norway spruce), <i>Pinus peuce</i> (Macedonian pine)	Typical mountain forest flora
	Alpine meadows (>2,000 m)	<i>Gentiana lutea</i> (yellow gentian, medicinal), <i>Primula veris</i> (primrose / cowslip), <i>Wulfenia baldaccii</i> (endemic)	Endemic species rare, medicinal use
Central Albania (Hills and inner valleys)	Oak forests and shrubs	<i>Quercus cerris</i> (Turkey oak), <i>Quercus frainetto</i> (Hungarian oak), <i>Juniperus oxycedrus</i> (red juniper)	Common inner-hill forests
	Rivers and valleys	<i>Platanus orientalis</i> (oriental plane), <i>Populus alba</i> (white poplar), <i>Alnus glutinosa</i> (black alder)	Riparian vegetation
Southern Albania (Muzina, Kurvelesh, Gramoz, Tomorr)	High mountains (1,500–2,500 m)	<i>Pinus nigra</i> (black pine), <i>Juniperus foetidissima</i> (stinking juniper), <i>Abies borisii-regis</i> (Balkan fir)	Typical southern mountain conifers
	Rare / endemic plants	<i>Sideritis raeseri</i> (mountain tea), <i>Forsythia europaea</i> (European forsythia)	Endemic species; important medicinal/aromatic plants
Albanian Coast (Adriatic & Ionian)	Typical Mediterranean vegetation	<i>Olea europaea</i> (olive), <i>Laurus nobilis</i> (bay laurel), <i>Myrtus communis</i> (myrtle), <i>Arbutus unedo</i> (wild strawberry tree)	Coastal / Mediterranean flora
	Sandy beaches and dunes	<i>Ammophila arenaria</i> (marram grass), <i>Eryngium maritimum</i> (sea holly)	Stabilizes dunes; adapted to saline soils

Footnote: a) Species names follow the Latin nomenclature [1,3,5]; b) Endemic species are highlighted for medicinal/aromatic value [2,4,6].

Albania is extremely rich in plant diversity, thanks to its varied climate and geography. Their distribution as showed in Figure 1. The plants have a wide use for medical plant, aromatherapy, in everyday uses like in the kitchen as spices.

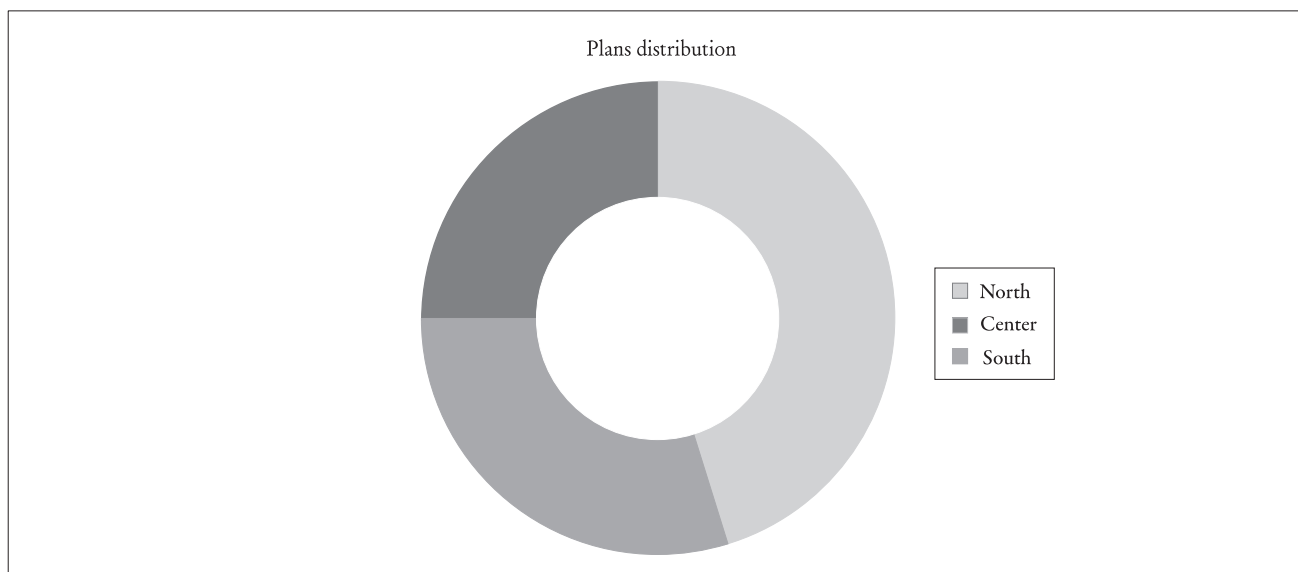


Figure 1. Plant distribution in different regions in Albania, the table has names of species.

Industry like cosmetic and the food industry can use them as colour pigment, different flavour in gums. Because of their composition some are used as essential oils as shown in Table 2.

Table 2. Uses and Benefits of Selected Medicinal and Aromatic Plants in Albania. This table presents the main uses, medicinal or other benefits, and additional applications of important plant species found across Albania [1,3,4,5,7].

Category	Plant	Primary Use	Medicinal/Other Benefits	Additional Uses
Medicinal & Aromatic Plants	Mountain Tea (<i>Sideritis</i> spp.)	Brewed as tea	Rich in antioxidants and vitamins, strengthens immunity, aids digestion, relieves colds	Can be dried and stored for winter
Medicinal & Aromatic Plants	Sage (<i>Salvia officinalis</i>)	Spice for meats and soups	Anti-inflammatory, soothes throat, aids digestion	Burning sage for natural air purification
Medicinal & Aromatic Plants	Oregano (<i>Thymus vulgaris</i>)	Spice for meats, vegetables, bread	Relieves cough, antimicrobial properties	Essential oil used in natural cleaning products
Medicinal & Aromatic Plants	Lavender (<i>Lavandula angustifolia</i>)	Aromatherapy, desserts, teas	Calming, aids sleep, reduces mild anxiety	Sachets for closets, relaxation
Trees & Leafy Plants	Olive (<i>Olea europaea</i>)	Olive oil for cooking, salads, cosmetics	—	Wood for furniture or firewood
Trees & Leafy Plants	Myrtle (<i>Myrtus communis</i>)	Decorative, perfumes, essential oils	Treats mild skin irritations and respiratory issues	—
Trees & Leafy Plants	Mastic Tree (<i>Pistacia lentiscus</i>)	Resin for chewing gum, flavouring, cosmetics	Aids digestion, natural antibacterial effects	—
Trees & Leafy Plants	Willow (<i>Salix</i> spp.)	—	Natural source of salicin (base for aspirin)	Making baskets or small handcrafted items

Uses of plants based on traditional knowledge and recent studies [1–3,6]. Some species are both medicinal and culinary; industrial uses include essential oils, pigments, and flavorings [2,7].

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