



**ISTANBUL
THE ECO-
FRIENDLY
CITY...**

İstanbul Ağaç ve Peyzaj AŞ





*“Istanbul will become
a green, fair, and
creative world city...”*

Ekrem İMAMOĞLU
From the Mayor of Istanbul





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A scenic view of a park. In the foreground, there are several tulips in various colors: yellow, pink, and red. In the middle ground, there is a pond with two white swans swimming. In the background, there is a rocky waterfall cascading down a hillside. The text is overlaid on the right side of the image.

“Ağaç ve Peyzaj
A.Ş. does
landscaping to
add beauty to
the urban life in
Istanbul, and
improve
the standard
of living in
Istanbul.”

From the President

Istanbul is one of the world's most important metropolises famous for its geography, history, and cultural heritage. We work restlessly in collaboration with all our affiliates to provide the service this unique city and our citizens deserve.

We spend every effort to give Istanbul the glory it deserves for its historical importance, and to make the people of Istanbul happy, and to improve the standard of living in Istanbul. In this context, from urban development, transportation, infrastructure to environmental protection, health, education, sports, culture, and arts we plan and design number of rational projects to improve the standards.

The services provided by our affiliates with an effective, efficient, and contemporary approach expand the economy of the city, create job opportunities, and plan the future of Istanbul. We work uninterruptedly with our affiliates that adopted the principles of merit, loyalty, and respect for human beings provide services to make living in Istanbul easier and more comfortable.

We implement landscaping projects intended to integrate the positive energy and the wonders of nature with the urban life, and improve the standard of living in Istanbul.

We will keep providing services and investing in Istanbul in line with the priority of making Istanbul the most livable city in the world, and people happy. Your admiration, support, and companionship on this path will be our greatest enthusiasm and motivation as always.

Ekrem İMAMOĞLU
From the Mayor of Istanbul





From the Managing Director

Dear people of Istanbul;

At "İstanbul Ağaç ve Peyzaj AŞ", we do landscaping and planting works in Istanbul, one of the most important and remarkable cities in the world, in line with the principles of Istanbul Metropolitan Municipality.

In all our landscaping activities, we primarily aim to increase the standard of living in Istanbul, and make the urban life in Istanbul, a large and historical city where 16 million people live, better, easier and more comfortable. In this regard, we manage the green spaces in our city using participatory management techniques.

Istanbul is a city to be taken as a model example both in Turkey and the world. It is one of our priorities to use the most accurate methods to maintain the green spaces in this city to help the ecological structure of the region, the green spaces, and the regional species survive. In this context, we endeavor to unite the citizens with nature in the broadest sense, and to provide accessible green spaces.

We keep creating new green spaces suitable for the ecosystem of our city under Istanbul Metropolitan Municipality's strategic plan 2020/2024, and aim to support nature with permanent plants, and by managing the scarce water sources effectively, and furnishing our surroundings with green spaces with low-cost and energy efficient solutions in line with our sustainable landscaping strategy.

In this regard, we held the Istanbul Green Spaces Workshop event in February 2020, after we had taken office. The workshop event held in cooperation with scientists and industrial representatives resulted in a road map of how to improve Istanbul's green spaces.

“In pursuance of our participatory and transparent management objective, we will work collectively to improve and preserve our green spaces, and hand down a green Istanbul to the next generations.”

Our two large nurseries located in Eyüpsultan-Alibeyköy and Pendik-Kurnaköy regions meet the need for trees and other ornamental plants (shrubs, seasonal flowers, roses, etc.) suitable for the climate and nature of Istanbul, as well as trees and other plants for use in landscape applications. We implement afforestation projects to prevent unplanned urbanization, and land erosions. Moreover, we contribute to the economy by processing excavated soil in our soil manufacturing plants to manufacture potting soil to be utilized in Istanbul's green spaces. In addition to these, as an ornamental plants retailer with gardening stores in ten locations in Istanbul, we are at the service of the people of Istanbul.

In this context, we endeavor to improve the quality and increase the number of our domestic / natural products by conducting research studies to encourage the production of high quality domestic products in this sector. Primarily, we aim to increase employment by supporting domestic production in collaboration with local producers as we create green spaces. As a hardworking and productive society, we believe that as long as we improve production and employment in this land, we will contribute to our country's agricultural development as well.

As Mr. Ekrem İmamoğlu, the Mayor of Istanbul underlines, we do these landscaping activities primarily for the comfort of our fellow citizens, to make Istanbul one of the world's best cities where people are happy to live in. In pursuance of our participatory and transparent management objective, we will rehabilitate and protect our green spaces altogether in accordance with your wishes and expectations, and we will work cooperatively to hand down a greener Istanbul to the next generations.

Ali SUKAS
Managing Director







Göztepe 60th Year Park, Kadıköy



About Us

Istanbul the eco- friendly city

The magnificent beauty of Istanbul cannot be thought apart from its parks, trees, plants, and flowers.

As an affiliate of Istanbul Metropolitan Municipality, İstanbul Ağaç ve Peyzaj AŞ (the title of the company can be translated as "Tree and Landscaping Co.") was established in 1997 to manage green spaces in Istanbul, meet the need for trees and ornamental plants, and to do scientific studies on this topic.

Since the day it was established, Ağaç ve Peyzaj AŞ has taken great steps to change the attitude of the people of Istanbul towards green spaces, nature, trees, and flowers. Recently, the company has created number of solutions for people to spend more time in and benefit from green spaces. Ağaç ve Peyzaj AŞ's human-oriented activities receive great appreciation from the public.

Moreover, Istanbul Ağaç ve Peyzaj AŞ implements environmental planning and landscaping projects, provides the supply of qualified plants needed in the sector, and manufactures and sells landscaping materials. At Ağaç ve Peyzaj AŞ, we maintain green spaces in an area of approximately 70 million square meters in Istanbul, and ensure that they remain colorful with seasonal flowers. In addition to the drainage basins, if there is an area where trees can grow, we plant there trees. In terms of afforestation and seasonal flowers, the species more resistant to the endemic structure of the city and need less water are preferred.

Urban forests and urban valleys can help the level of the standard of living of the people of Istanbul increase. Rather than one-day projects aiming to save the day, we design and implement human-oriented projects so that our children, our future, can live in a greener, cleaner, and livable Istanbul.

Istanbul has been the capital of world civilizations, and is an ancient city of unique for its beauty, history, culture, and the Bosphorus. At Istanbul Ağaç ve Peyzaj A.Ş., our vision is the words of Mr. Ekrem İmamoğlu, the Mayor of Istanbul "I shall not be unfaithful to this city, and I shall never allow anyone to be unfaithful to it" aiming to put an end to the misery this city has long suffered from unfaithfulness. Our experienced and skilled teams work restlessly to hand down the harmony of green and blue to next generations and to increase the number of green spaces for the benefit of the society, and to make Istanbul a city where 16 million people live happily.





In pursuance of our objective to establish gardening stores, the retail chain to introduce plants to the society, we opened Turkey's first and largest gardening store (Bahçe Market) in Alibeyköy. The people of Istanbul can find all kinds of ornamental plants, all kinds of trees, and fruit saplings in our gardening stores.

We planned further projects to open more gardening stores – increasing rapidly in number. So, the people of Istanbul can find a gardening store nearby. The gardening stores have become points of attraction where people can breathe clean air and enjoy shopping.

At Istanbul Ağaç ve Peyzaj AŞ, soil manufacturing plants, we manufacture fertile potting soil from excavated soils for use in landscaping; as the leading company in this sector, we keep designing new landscaping projects and manufacturing high quality products with our teams of specialists. Our soil manufacturing plants in Alibeyköy and Pendik provide considerable inputs to the green spaces in Istanbul. We manufacture high quality potting soil and potting mix for use in green spaces, and growing plants and flowers.

We have laboratories where we provide services including water, soil and plant analyzes with great care to help producers increase their efficiency.

In pursuance of our principles of continuous improvement, supporting local producers, and conserving the ecological balance in the city landscape, at Istanbul Ağaç ve Peyzaj AŞ, we aim to provide high quality products and services to the society, and continue our pioneering work that sets a model to upgrade industry standards all around the world.



Activities and Implementations

Creating sustainable green spaces for the people of Istanbul is as important as preserving and maintaining such spaces.

In pursuance of this objective, we maintain the city landscape regularly to provide the people of Istanbul the joy of living in a colorful city with lots of green spaces.

WHAT DO WE DO?



We take care of the green spaces in Istanbul, and create new green spaces.

We open Gardening Stores to supply the industry and the society with everything they need for gardening.

We design landscape projects to enhance the aesthetics of the city; our landscaping activities include parks, roadside planting, and planting trees around crossroads, and drainage basins, and build urban valleys.

At Alibeyköy and Pendik Nurseries, the largest potted plant production and logistics bases in Turkey we keep, manage, and forward many different types of outdoor ornamental plants, including trees and shrubs for use in Landscaping in Istanbul and to supply the industry with the materials they need.

We conduct research studies in all over the country to create new green spaces particularly in Istanbul.

We utilize excavated soil into fertile potting soil for use in landscaping.

We do activities to raise and create public awareness about environmental issues.

We constantly conduct R&D studies to improve our product quality to meet the highest standards.

We promote the production of seasonal flowers for use in landscaping in Istanbul conducted by domestic horticultural producers cooperatively supports the producers, and contributes to the employment in ornamental flower industry.

We implement the Production of New Rose Species Project in cooperation with "Yalova Atatürk Bahçe Kùltürleri Merkezi" to supply the landscapers with patented domestic rose species.









"Emirgan Korusu" (Emirgan Park), Sarıyer

High Quality Recreational Spaces

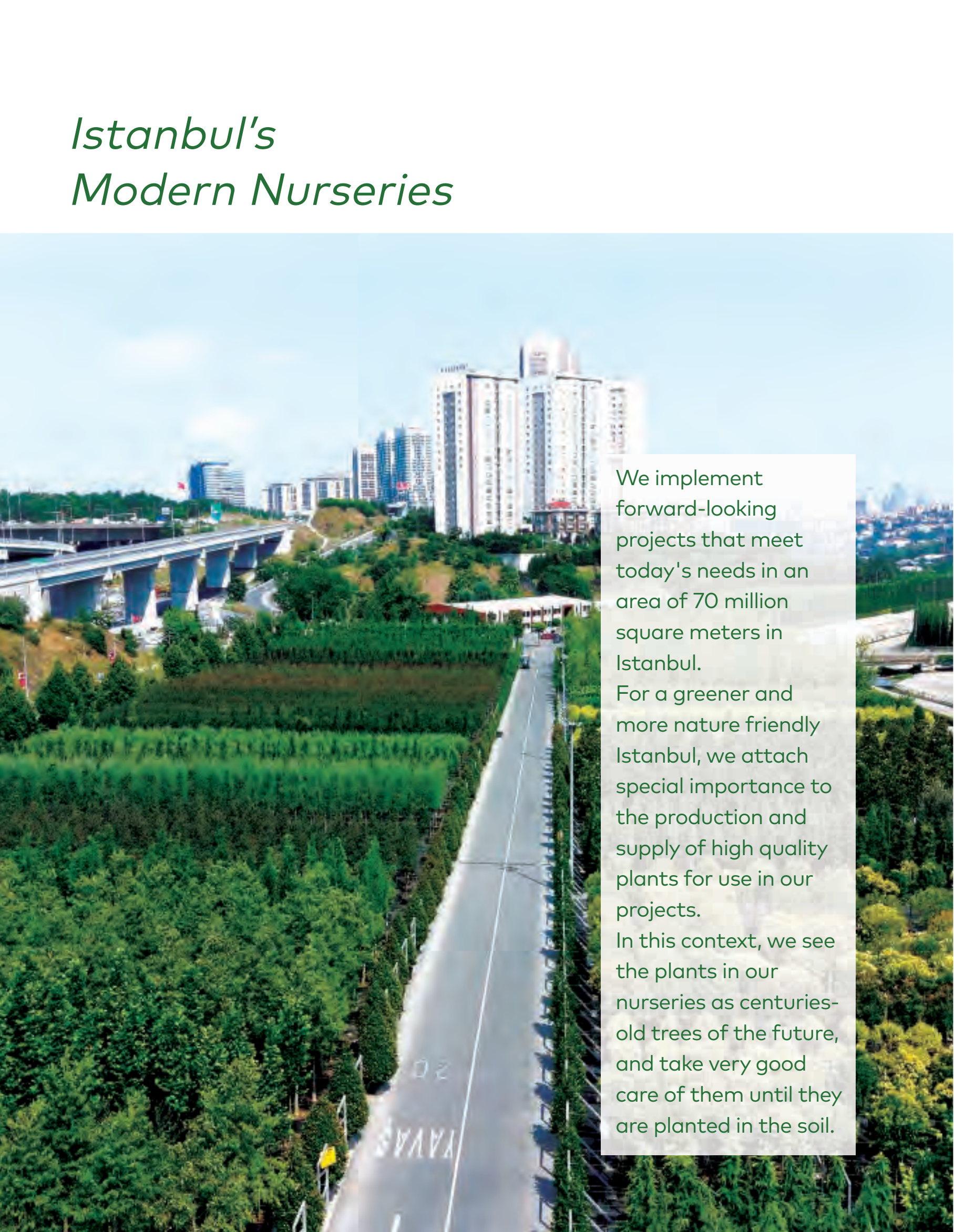
The parks and green spaces built and landscaped by Istanbul Ağaç ve Peyzaj AŞ all around the city increase the level of the standard of living in Istanbul. We make recreational spaces more functional by constructing walking trails, fields for sports and public events in parks and gardens.

The landscaping projects implemented successfully in Istanbul attract attention from many countries around the world, and local administrators and their technical committees from different countries visit Istanbul to examine the landscaping activities in Istanbul.



Gölet Park, Sultanbeyli

Istanbul's Modern Nurseries



We implement forward-looking projects that meet today's needs in an area of 70 million square meters in Istanbul.

For a greener and more nature friendly Istanbul, we attach special importance to the production and supply of high quality plants for use in our projects.

In this context, we see the plants in our nurseries as centuries-old trees of the future, and take very good care of them until they are planted in the soil.



Alibeyköy Nursery

Turkey's largest nursery with a capacity of 520 thousand potted plants is in Alibeyköy Nursery established in 185 thousand m² area. At the nursery, featuring modern facilities, expert staff, high quality products, and high technology that makes it the leader in this field, we grow potted plants, and maintain and reshape plants. Moreover, Turkey's first potting soil manufacturing plant with annual production capacity of 400,000m³ potting soil established in an area of 22 thousand m² is in the nursery. In terms of infrastructure, logistics, and technological equipment, Alibeyköy Nursery constantly improved and developed is a modern nursery that exceeds European standards.

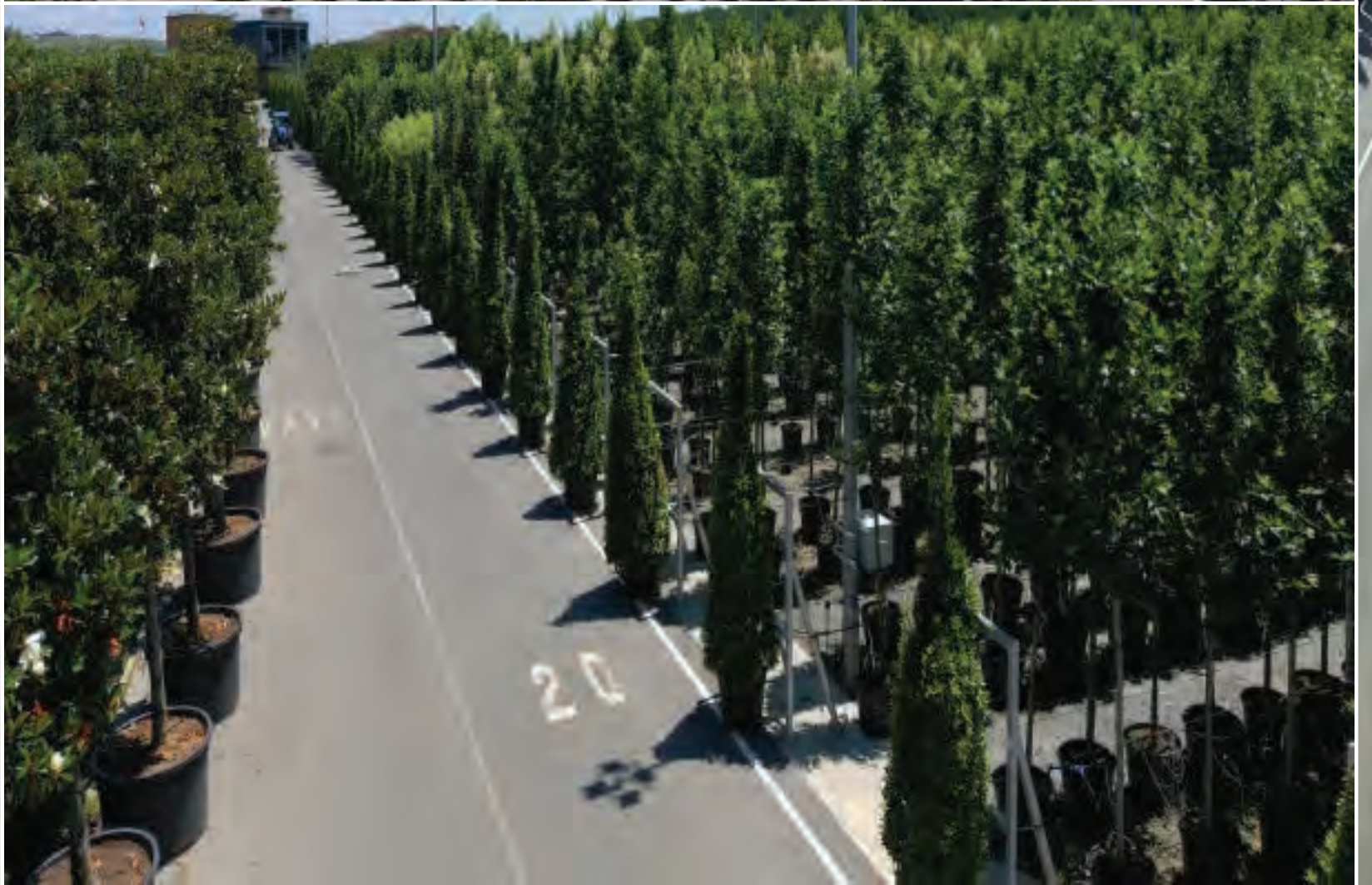
Pendik Nursery

Pendik Nursery established in an area of 124 thousand square meters in the Anatolian Side of Istanbul meets the need for trees and ornamental plants with a production capacity of 315 thousand potted plants. The nursery hosts a Potting Soil Manufacturing Plant where excavated soil is utilized into potting soil for use in landscaping; the plant established in an area of 20 thousand m²; has an annual production capacity of 200,000m³ potting soil.





Alibeyköy Nursery





Pendik Nursery



Alibeyköy Garden Market

Istanbul Ağaç ve Peyzaj AŞ opened the first gardening store (Bahçe Market) that introduces a new sales concept to the landscaping industry in Turkey in 2011. "Bahçe Market" established within Alibeyköy Nursery in an area of 13,800m² area and has 1,212m² indoors area is both a retailer and a wholesaler.

At Bahçe Market -has the motto of "Bahçeye dair her şey" (Everything about the garden)-, nearly 4,500 items including indoor and outdoor ornamental plants, fruit trees, landscaping materials, and gardening equipment are available.

Mini Garden Our Markets

The mini gardening stores with various types of plants are at the service of the people of Istanbul in 9 locations including Başakşehir, Emirgan, Florya, Göztepe, Hıdiv, Karacaahmet, Pendik, Sarıyer, and Zincirlikuyu.



BAŞAKŞEHİR MINI GARDEN MARKET

It has 120m² outdoors area, and 200m² indoors area



EMİRGAN MINI GARDEN MARKET

It has 16m² outdoors area, and 108m² indoors area.



FLORYA MINI GARDEN MARKET

Established in an area of 100m², and has an indoor space of 15m²



GÖZTEPE MINI GARDEN MARKET

It has 350m² outdoors area, and, 30m² indoors area.



HİDİV MINI GARDEN MARKET

Operates in an 20m² indoor, and 100m² outdoor space.



KARACAAHMET MINI GARDEN MARKET

It has 16m² outdoors area, and, 50m² indoors area.



PENDİK MINI GARDEN MARKET

Has an 185m² indoor, and 250m² outdoor space.



SARIYER GARDEN MARKET

Established in an area of 16,000m²; has 411m² indoors area.



ZİNCİRLİKUYU MINI GARDEN MARKET

Established in an area of 75m²; including 15m² indoors area.



Everything about
the garden...









"Yıldız Korusu" (Yıldız Park), Beşiktaş

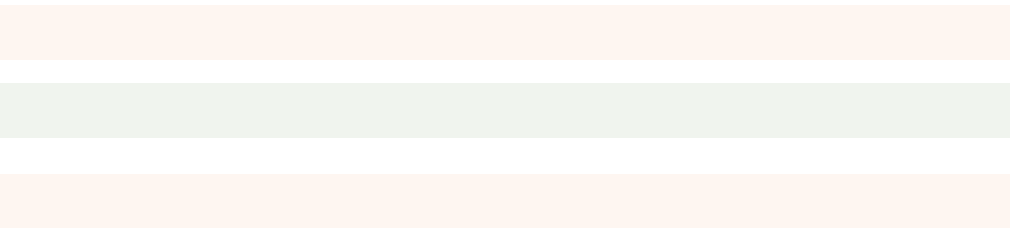


Landscape Roses

Landscape roses, the colorful flowers in cities, have been playing an important role in the beauty of Istanbul since 2005. Landscape roses are the most suitable roses for use in landscaping especially in sustainable landscaping.

“

They survive high temperatures up to 50 degrees Celsius.



Roses are the most preferred items in landscaping for their unique features.

”

*Istanbul is in blend
of colors with the
world famous
landscape roses.*

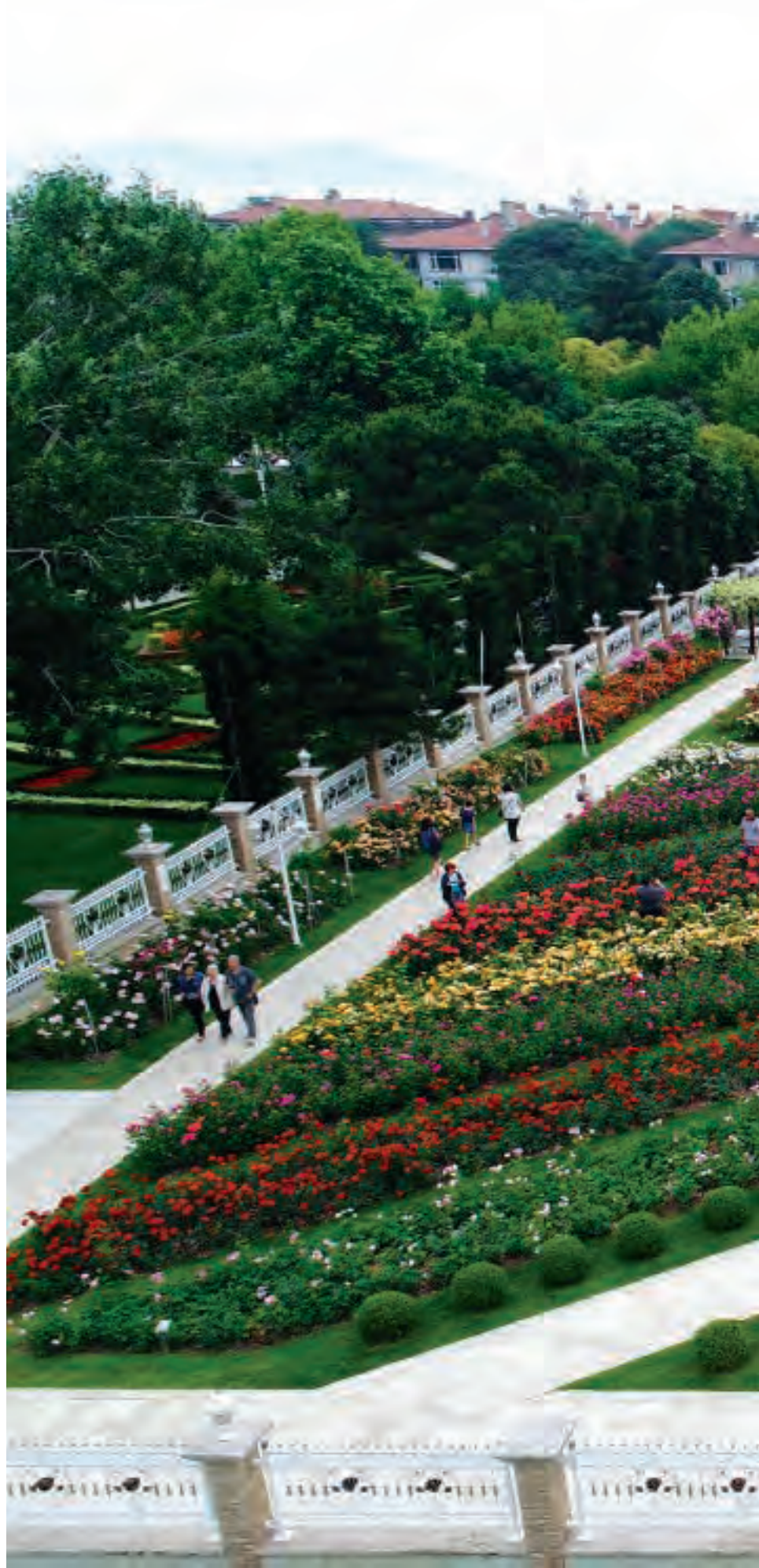


Istanbul's Rose Gardens

Rose Garden in Göztepe Park

Landscape roses grown domestically by flower producers in Akyazı, Sakarya; Geyve, Umurbey, Sapanca; Yenişehir, Kestel, Bursa are sold in pots or without pots only at Istanbul Ağaç ve Peyzaj AŞ in Istanbul. The produced roses keep improving Istanbul's beauty. "Göztepe 60. Yıl Parkı" (Rose Garden in Göztepe Park) is one of the best places where the roses are exhibited.

Istanbul Ağaç ve Peyzaj AŞ supports producers for domestic production and employment, and greatly contributes to national economy. Istanbul Ağaç ve Peyzaj AŞ is the only company licensed to produce and sell landscape roses in Turkey, and the company's license was extended until 2025 by a protocol entered in force in 2015.





Beauty enhanced by sharing...





Tulips symbolize Istanbul

Tulips, the symbol of Istanbul are now exhibited in major parks. The smell of tulip bulbs planted in winter creates a magical beauty in Emirgan Korusu (Emirgan Park), Hidiv Kasrı (the Khedive's Palace), Gülhane Park, and Göztepe Park in spring.

You can buy the bulbs sold in December and January from our gardening stores (Bahçe Market), if you like to grow tulips, hyacinths, narcissus. and muscari in your garden or balcony.

You will witness a great visual feast in your garden or balcony in March, April, and May.





Pierre Loti, Haliç

Collective Business Model Projects



*Support
domestic
producer,
contribute to
environmental
protection*

Istanbul Ağaç ve Peyzaj AŞ's offers a "Collective Business Model" to pioneer the entrepreneurs in ornamental flowers and landscaping industry, and therefore contributes to rural development, domestic production, employment, and national economy.

The projects designed in the scope of collective business model, purchase guarantee agreements are entered into with domestic producers to grow seasonal flowers and landscape roses to fill the need. We offer technical training to, and supply domestic producers with the materials they use in production in various regions and rural areas of Turkey. In this context, hundreds of producers we worked collectively grew millions of flowers in various regions.



We promote
production
and support
employment



With Collective Business Model Projects



Thanks to the Collective Business Model Projects, the locals in various districts including Sakarya, Bursa, and Yalova grew roses, and thus, the production of plants and flowers under purchase guarantee agreements was promoted.

The production of seasonal flowers promoted by İstanbul Ağaç ve Peyzaj AŞ in Beykoz, Çatalca, Silivri, and Şile in İstanbul, and Bayındır in İzmir contributes to the employment in ornamental flower industry.











Between Kavacak and Ümraniye Junction

R&D Studies and Projects

In terms of environmental protection and sustainable use of sources, we attach importance to R&D Studies.



We conduct R&D Studies in collaboration with universities, nongovernmental organization, and our suppliers.



1-Businesses or private/legal persons involved in agriculture and landscaping can apply to our R&D laboratory -accredited by Turkish Accreditation Agency (TÜRKAK) and authorized by the Ministry of Agriculture and Forestry - for testing and analysis.

2-The laboratory's specialized team using reliable methods and the latest technology provides services including soil, irrigation water, turf, plant, and soil improver analyses.





Laboratory

Istanbul Ağaç ve Peyzaj AŞ's laboratory accredited by the Turkish Accreditation Agency (TÜRKAK) in 2017 to have 27 parameters provides internationally accepted results.

The laboratory established in 2010 was authorized by the Ministry of Agriculture and Forestry to provide basic soil analysis services in 2013", and further authorized to provide detailed soil analysis, irrigation water analysis, and plant analysis services in 2016.



R&D Center

R&D Center was established after the establishment of the R&D and Testing Greenhouse under the Financial Support Program of Istanbul Development Agency in an area of 600m² in 2011.

R&D Center conducts research studies to meet the needs of corporations, and in the fields of landscaping, agriculture, and forestry.

In addition to them The studies include;

Indoor and outdoor plants,

Soil testing,

Fertilizer Testing,

Water testing Test results are observationally, statistically, and scientifically analyzed, assessed, and documented.

Furthermore, projects are implemented in cooperation with universities.

Projects

At Istanbul Ağaç ve Peyzaj AŞ, we attach great importance to R&D studies; hence, we keep planning new projects. "Production of New Rose Species Project", the project implemented in cooperation with "Atatürk Bahçe Kùltürleri Merkezi", -the institution involved in the production of cultivars - we aim to reduce our foreign-source dependency on ornamental plants, and to have 50 rose species registered in the name of Turkey by 2023.

We also aim to reuse excavated soil in the scope of our Modern Soil Management Facility Project to establish an automated facility with a standard and homogenous output; reaching to a total potting soil manufacturing capacity of 1 million m³ per year including 400 m³ in the Anatolian and 600m³ in the European parts of Istanbul is aimed.

In the scope of the "Soilless Agriculture Project", implemented in cooperation with Yıldız Technical University, vegetables and fruits are grown in a glass greenhouse established in an area of 2 decares in the city without any impact on environment, in pursuance of Good Agricultural Practices.

As a Collective Business Model, the "Seasonal Flower and Rose Production with Purchase Guarantee" business we promote in the scope of "Finding solutions to the problems of cities cooperatively by public and private sectors" was found eligible to be included in the Research and Publications of the United Nations Development Program (UNDP) Research Catalog.



Soilless Agriculture Greenhouse

The "Soilless Agriculture Research and Application Greenhouse" was opened under the protocol entered into by and between Istanbul Ağaç ve Peyzaj AŞ and Yıldız Technical University in 2017. In pursuance of the protocol, the idle greenhouse in the university's Davutpaşa Campus was renovated, and furnished with the necessary equipment, and transformed into a modern greenhouse. Tomatoes, strawberries, and curly lettuce are grown in the glass greenhouse established in an area of 2 decares. The crop harvested there is consumed at Istanbul Metropolitan Municipality's Social Facilities.

Natural Crop Pollination by Bees

The soilless agriculture greenhouse is equipped with the best technological systems. The automated air conditioning system checks the ambient light, temperature, humidity, and carbon dioxide, and oxygen in the greenhouse, and provides the optimum conditions. By this means, plants are kept healthy, and losses due to death from diseases are prevented. In soilless agriculture, fallowing is not required, and therefore, sustainable production is achieved. In the strawberries and tomatoes section of the greenhouse, bumblebees (*Bombus*) are used to ensure a natural pollination process to support the growth and wellbeing of plants



No Chemicals are Used

The plants' need for nutrients is met by the suitable fertilizers recommended by the Ministry of Agriculture and Forestry to ensure good agricultural practice for the supply of nutrients. There is a nutrition recipe for each species to ensure natural growth. In order to harvest naturally grown and nutritious crop that will not affect human health, we do not use any chemicals.



*Ağaç ve
Peyzaj AŞ
is constantly
improved and
developed.*

Specialization Training on Landscaping

Regarding our landscaping activities, we give landscaping training courses to the employees of İstanbul Ağaç ve Peyzaj AŞ and the Department of Parks, Gardens and Green Areas of İstanbul Metropolitan Municipality in the scope of the "Specialization Training on Landscaping" program. The technical teams from the district municipalities in İstanbul can attend these training courses.

The "Specialization in Landscaping Program" aims to improve professional knowledge, skills, and expertise, and increase efficiency in production and services, and develop industrial innovations, methods and techniques, and to raise awareness about protection and development on the basis of sustainability.



Young Talents Development Program of Istanbul Metropolitan Municipality

İstanbul Ağaç ve Peyzaj AŞ Workshop

The workshop to include the young employees under the age of 30 working for the Affiliates of Istanbul Metropolitan Municipality was held at Ağaç Peyzaj AŞ within the scope of the program with the motto of "Gençliğimiz var" ("We have youth").

121 young talents attended the workshop hosted by Ağaç Peyzaj AŞ between November 30, 2020 and December 4, 2020. The attendees were informed about the green space arrangements, afforestation, and landscaping activities in Istanbul. They were also informed about the activities done at Alibeyköy Nursery, including the soil manufacturing plant, and the rose garden, and the attendees participated in the works. The R&D laboratory and the services including soil, plant, irrigation water, and soil improver analyses provided by the laboratory's departments were also introduced.

Workshops held in the scope of the program

- Visit to Alibeyköy Nursery, introduction of indoor and outdoor ornamental plants with an overview on the applications,
- Visit to the Soil Manufacturing Plant with an overview on the applications,
- Visit to the rose garden with an overview on the applications,
- Overview on the services provided by the laboratory,
- Visit to "Bahçe Market", the gardening store, with an overview on the flowers.



Pruning Training provided by LAPPEN, the leading tree nursery company in Germany

LAPPEN, one of the major tree nursery companies in Germany invited by Ağaç ve Peyzaj AŞ was in Istanbul.

Dieter Friedrich of LAPPEN provided a two-day theoretic and practical training to our pruning staff. Emphasizing the significance of correct pruning, Friedrich said, "The form of a tree is determined by pruning. In addition, trees that are properly pruned grow much better. When pruning, you can damage the tree and cause it to dry out. For this reason, the tools you use are also very important".

Our Managing Director Ali Sukas, who watched the training on site, said "It was a very useful training for our employees. LAPPEN is one of the most important seedling producers in the world. They gave some insight into their experiences. We watched and listened very carefully. We attach importance to this kind of trainings in order not to fall behind the world".

Dieter Friedrich also gave some insight into his experiences in nursery practices and potting.

Abelia spp.

- Overall distribution:** This species was first identified at Rovelli Nursery in Italy in 1866, and is a hybrid resulting from a cross between *A. Chinensis* × *A. uniflora*.
- Distribution in Turkey:** Not native to Turkey; very much in demand for urban landscaping.
- Appearance:** They are evergreen, round shrubs, and can grow to a height of 2 meters. The reddish-brown young leaves turn to green in time.
- Flowers and fruit:** The flowers are scented, white to light pink colored appear in the upper leaf axils and stem ends in a bell shaped cyme. Flowering period is from July to September. The fruit is brown, ovate, small, and inconspicuous.



Abelia spp.



Acer spp.

- Overall distribution:** There are approximately 200 species in the Northern Hemisphere, most of which are native to Asia, Europe, and North America.
- Distribution in Turkey:** There are 12 species native to the Black Sea, and South and West Anatolia regions.
- Appearance:** They are deciduous long trees or in the form of woody shrubs. The trunk is covered in rough and fissured, or smooth bark.
- Flowers and fruit:** The flowers grow downwards or upwards, and in simple or grouped in complex corymbiform cymes. The fruit is samara with two winged nutlets.

Acer spp.

Aesculus spp.

Overall distribution: Aesculus is native to the Balkan Peninsula.

Distribution in Turkey: They do not grow in the wild. As an ornamental plant, it is cultivated in parks and gardens.

Appearance: They are deciduous showy trees that grow to a height of up to 25 meters with domed crown. The trunk is covered in reddish-brown fissured bark.

Flowers and fruit: The flowers are usually white with a yellow to pink blotch, and produced in 20 to 30 cm tall erect panicles. Flowers are produced in May. The fruit is in a fleshy and spiky capsule with a short stalk. It contains one to two brown seeds (chestnuts).





Aesculus spp.

Buxus spp.

Overall distribution: The tree is native to Europe, Australia, North Africa, Caucasus, Turkey, and Iran.

Distribution in Turkey: They grow in the wild. It is widely used in landscaping.

Appearance: They can be in the form of a shrub with dense branches, or a tree that can grow to a height of up to 10 meters.

Flowers and fruit: The flowers are arranged sideways in clusters under the leaves. The fruit capsule is skin-like and ripe, approximately 8 mm in length, and dark colored.



Buxus spp.



Carpinus spp.

- Overall distribution:** Approximately 41 species of the tree are native to Asia, the Himalayas, Europe, and North America.
- Distribution in Turkey:** There are two species of the tree native to the Black Sea, and Thrace regions, and partially in the Amanos Mountains in the Southeastern Anatolia region.
- Appearance:** They can be deciduous long trees that can grow up to a height of 25 meters with gray trunk, or in the form of long shrub. Their color changes to golden yellow in summer.
- Flowers and fruit:** Male fruits are pendant and in the form of spike-like inflorescence. Flowering and foliation occurs in spring, and fruits are ripened in autumn. The Fruit is held in ornamental leafy bract.

Carpinus spp.



Cercis siliquastrum

Cercis siliquastrum

- Overall distribution:** The tree is native to Southern Europe, Mediterranean basin, and Western Asia.
- Distribution in Turkey:** They can live at an altitude that ranges from 0 to 1370 meters in macquis shrublands, and Calabrian pine forests in the Aegean – Mediterranean shores.
- Appearance:** They are bushy, deciduous small trees with domed crown, or shrubs that grow to a height of up to 10 m.
- Flowers and fruit:** The flowers are pink to purple, and grow out of terminal shoots and the trunk in bundles of nearly 10. Inflorescence period is between April and May.





Cedrus spp.

- Overall distribution:** Cedrus is endemic to Lebanon, North Africa, South Anatolia, and the Himalayas.
- Distribution in Turkey:** Cedrus grows in the Taurus Mountains, and *Cedrus libani* is endemic to the region between Erbaa, Tokat, and Niksar.
- Appearance:** They are evergreen trees, can reach 40 meters in height, the crown is conical when young, becoming broadly tabular with age. The bark is dark grey, and is run through by deep, horizontal fissures.
- Flowers and cone:** Flower and cone: Flowering occurs in autumn. Its cones are solitary and erect and disintegrate when mature. The cones are brown and the outer surface of their scales is covered in silky hair.

Cedrus spp.

Cortaderia spp.

- Overall distribution:** It is endemic to Argentina
- Distribution in Turkey:** It does not grow in the wild. Used as barrier plants, or for windbreak in landscaping.
- Appearance:** It is an evergreen huge ornamental plant that grows to a height of 2.5 meters. The foliage resembles a fountain.
- Flowers and cone:** Flowering occurs in summer with white chamomis or pink flowers appear in 30 to 90 cm long panicles.



Cortaderia spp.

Cupressocyparis leylandii

- Overall distribution:** The tree is a hybrid produced in England.
- Distribution in Turkey:** Its cultivars with silvery and yellowish variegated leaves are widely used in parks and gardens.
- Appearance:** They are fast growing evergreen trees, can reach 30 to 40 meters in height, the crown is conical or columnar. The trunk is vertically fissured.
- Flowers and fruit:** The seeds are found in cones about 2 cm in length, each with eight scales and five seeds with tiny resinous vesicles. Male flowers have black-red colors, and female flowers have greyish blue-beige in color.



Cupressocyparis leylandii



Cupressus spp.

- Overall distribution:** Cupressus has 19 species widespread in North America, Mediterranean Basin, Central Asia, the Himalayas, and China.
- Distribution in Turkey:** *Cupressus sempervirens* is the only species endemic to the Mediterranean climate zone. Some exotic species are grown as ornamental plants.
- Appearance:** It is a long bush, or evergreen tree that can reach to a height of 30m with a pyramidal, conic, or round crown.
- Flowers and cone:** The flowers are monoecious. The seed cones look like a football, and reach maturity two years after pollination. The cones are woody, and have hard scales often with a spur in their backs. They contain a number of small, winged seeds.

Cupressus spp.

Euonymus spp.

- Overall distribution:** There are nearly 130 species of this plant, and it is native to East Asia, Europe, Australia, North America, and Madagascar.
- Distribution in Turkey:** 6 species exist in various regions of Turkey. Widely used in landscaping.
- Appearance:** They are deciduous or evergreen shrubs or small trees.
- Flowers and fruit:** The flowers are consisted of 4 to 5 parts. The fruit is a 4- to 5-valved pod-like berry, which splits open. The fleshy-coated seeds are entirely or partly bright and colored.



Euonymus spp.



Elaeagnus spp.

- Overall distribution:** Oleaster is native to the Balkans, Russia, Iran, and Anatolia.
- Distribution in Turkey:** Two oleander varieties are endemic to Turkey. They are widely grown outdoors.
- Appearance:** They are deciduous, vertical small trees that can reach 6 meters in height.
- Flowers and fruit:** Flowering occurs in spring, the flowers are scented, and appear in bell shaped or tubular corymbs, and the flower is silver in color from the outside with yellow inside. The fruit is ovate, approximately 1 cm in length, and red when ripe.

Elaeagnus spp.



Fraxinus spp.

Fraxinus spp.

Overall distribution: They are rare in the regions with temperate climate in the Northern Hemisphere, and endemic to the tropical regions.

Distribution in Turkey: The tree has three species, and seven taxons are endemic to Turkey. They have been cultivated as ornamental plants in Turkey in recent years.

Appearance: They are deciduous fast growing trees that can grow to a height of 40 meters. The bark is gray and fissured in the form of a dens web.

Flowers and fruit: The flowers are small, and green or purple and appear in terminal corymbs. The fruit has a winged nutlet, and is 2.5 to 5 cm in length.



Ginkgo biloba

- Overall distribution:** Ginkgo biloba is native to East Asia.
- Distribution in Turkey:** It does not grow in the wild; cultivated solitary or in groups of three in parks and gardens. It is also preferred in roadside planting.
- Appearance:** They are deciduous huge trees that can grow to a height of 40 meters. Young trees have a conical crown that becomes broader as the tree ages. The trunk is light gray-grayish brown, and becomes vertically fissured as the tree ages.
- Flowers and fruit:** Male and female flowers are inconspicuous, and formed from perennial short shoots on the leaf axils. Flowering period is April to May. The embryo matures after autumn and its outer layer is yellow, soft, and fruit-like, and smells like rancid butter, and beneath the outer layer is a woody inner layer.





Ginkgo biloba



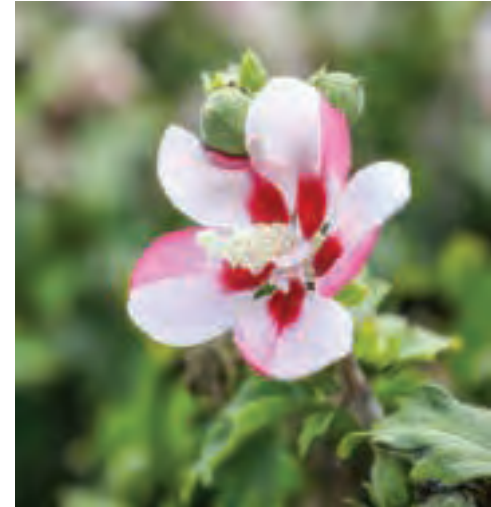
Hedera helix

- Overall distribution:** Hedera helix is endemic from most of Europe into Caucasus.
- Distribution in Turkey:** It grows in broad-leaved forests and regions with humid climates in Turkey .
- Appearance:** It is an evergreen, perennial, climbing woody plant, growing up to 30 meters.
- Flowers and fruit:** Flowering starts after 8-10 years of age and produced in umbels. They are greenish-yellow, and scented. The fruit are yellow or bluish to black berries. The flower, fruit, and shoots are mildly toxic.

Hedera helix

Hibiscus spp.

- Overall distribution:** Hibiscus is native to tropical regions and South Asia, and has 241 species.
- Distribution in Turkey:** Hibiscus does not exist naturally, it has conspicuous flowers and widely cultivated as ornamental plants in parks and gardens.
- Appearance:** They are deciduous shrubs or trees that grow slowly and can reach 3 meters in height. The trunk is light gray. In autumn the plant's color turns into golden yellow.
- Flowers and fruit:** The flowers are large and conspicuous. The plant appears to have flowers from late June to late September. The fruit are capsules that split into five pieces.



Hibiscus spp.



Hydrangea spp.

- Overall distribution:** Hydrangea is native to Southeast Asia.
- Distribution in Turkey:** They do not grow naturally. Several species are cultivated as ornamental plants for use in parks and gardens in the regions with temperate climate in Turkey.
- Appearance:** They are deciduous shrubs with dense branches and a round crown, and can reach 2 meters in height.
- Flowers and fruit:** The flowers are produced in corymbs or panicles with 10 to 20 cm across at the ends of the terminal stems. The flowers appear between June and September can be blue, pink, yellow, and white, and are long-lasting. The fruit capsule is ovate.

Hydrangea spp.

Lagerstroemia indica

- Overall distribution:** Lagerstroemia is native to East Asia, primarily China and Japan. It is widely cultivated as an ornamental plant in countries with tropical and subtropical climates.
- Distribution in Turkey:** As an ornamental plant, it is cultivated in coastal cities, and the parks and gardens of Istanbul and İzmir.
- Appearance:** They are deciduous small trees, or long shrubby trees that grow to a height of 7 meters, with round crown. The bark is thin, smooth, and pinkish brown.
- Flowers and fruit:** The Flowers are borne from July to September, can be pink, purple, or white in color. The flowers are vertically arranged in panicles, and each has a width of 3 to 4 cm, and a length of 4 to 20 cm. The fruit are ellipsoid capsules.



Lagerstroemia indica

Lavandula spp.

Overall distribution: It is native to South Europa from Spain to Greece.

Appearance: It is a short shrub or semi-shrub growing as high as 30 to 50 cm. It has pulviniform branches. Its width and length are equal.

Flowers and fruit: Multiple flowers appear in corymbiform cymes consisted of two to three branches. The flowers are uniform, white with 6 to 8 mm diameter. The fruit are glossy dark blue-purple, ovate with 8 mm diameter, juicy, and contain seeds.



Lavandula spp.



Laurus nobilis

- Overall distribution:** It is native to Southeast Europe, and Turkey, and has three species.
- Distribution in Turkey:** Only *Laurus nobilis* grows in the wild, and is widespread in coastal regions.
- Appearance:** It is a vertically growing evergreen tall shrub or small tree, variable in size sometimes reaching 15m.
- Flowers and fruit:** The flowers borne in April, and are inconspicuous, small, and cream in color. All flowers have pedicels, and appear in corymbiform cymes. The fruit is a berry-like drupe, and black when ripe.

Laurus nobilis



Liquidambar spp.

Liquidambar spp.

- Overall distribution:** Liquidambar is native to the regions with temperate climate in West Asia, and North America, and to the highlands in subtropical Asia, and Mexico.
- Distribution in Turkey:** Only *Liquidambar orientalis* is endemic to Muğla, Turkey.
- Appearance:** It is a deciduous tree, with wide crown and round form. Young shoots are covered in thick fungus layer. There are balsam channels in the trunk, leaves, and flowers.
- Flowers and fruit:** The flowers bloom with greenish leaves. Male flowers appear on racemes at the end of long pedicles in the axils of leaves. The fruit capsule has spheriform and woody.



Magnolia spp.

- Overall distribution:** It is native to America, Japan, and China. There is a hybrid form resulting from a cross between *Magnolia x soulangeana* produced in France
- Distribution in Turkey:** It is not native to Turkey; it is grown as an ornamental plant.
- Appearance:** It is an evergreen tree with pyramidal crown, and grows to a height of 25 to 30 meters.
- Flowers and fruit:** Inflorescence starts in April, depending on the species. The flowers appear solitary on terminal shoots are pink and white, and scented. The fruit is soft or aggregated, depending on the species.



Magnolia spp.



Nandina domestica

- Overall distribution:** It is native to East Asia
- Distribution in Turkey:** It is not native to Turkey; as an ornamental plant, widely grown in gardens and parks for its appearance.
- Appearance:** It is an erect evergreen shrub that can reach to a height of up to 3m with numerous stems growing from ground level, and has no thorns.
- Flowers and fruit:** The inflorescences are panicles axillary or terminal erect with numerous white colored flowers. The flowers appear from March to June. The fruit is a bright red berry 6 to 8 mm diameter, and often persists on the plant for a long time.

Nandina domestica



Nerium oleander

- Overall distribution:** Nerium oleander is a shrub or small tree native to the Mediterranean basin, Iraq, and Iran.
- Distribution in Turkey:** Oleander is widespread in Çanakkale, Balıkesir, Manisa, İzmir, Aydın, Denizli, Muğla, Antalya, Mersin, Adana, and Hatay, and widely cultivated as an ornamental plant.
- Appearance:** Oleander is an evergreen woody shrub with white, red, and pink flowers, and grows up to a height of 6 meters. It is a toxic plant.
- Flowers and fruit:** Its flowers have white, pink, or red petals and grow in clusters. The fruit capsule is a 10 to 18 cm long narrow tube with stripes.

Nerium oleander

Photinia serrulata

- Overall distribution:** The tree is native to China.
- Distribution in Turkey:** They are not popular in Turkey, and as ornamentals, are cultivated in parks and gardens.
- Appearance:** Photinia serrulata is an evergreen shrub or tree with dense branches, symmetrical crown, and round or vase-like form, and can grow to a height of 4 meters.
- Flowers and fruit:** The flowers are very conspicuous, and white in color; borne in spring and summer, and have unpleasant scent. The fruit is 1 cm in length, soft, round, and red.



Photinia serrulata

Platanus spp.

- Overall distribution:** The tree has 9 species, the natural distribution of which extends from North America, Mexico, and Southern Europe to the Himalayas.
- Distribution in Turkey:** Only *Platanus orientalis* L. is endemic to Turkey. It is found naturally in riverine settings in all over Turkey, and preferred in roadside planting, and in parks and gardens.
- Appearance:** They are large, deciduous trees with thick branches. The tree's bark cracks and falls off in the form of irregular sheets.
- Flowers and fruit:** The flowers are monoecious with round, and have burr-like shape, borne in clusters on a stem. The male and female clusters look alike.





Platanus spp.



Pinus pinea

- Overall distribution:** The tree is endemic to the Mediterranean basin, and found in all over the Mediterranean region from Portugal to Anatolia. Its largest habitat in the world is Anatolia.
- Distribution in Turkey:** It is endemic to primarily the Aegean region, rarely the Mediterranean region, very rarely the Black Sea region forming small forests around Bartın and Artvin.
- Appearance:** They are evergreen trees that can reach 30 meters in height, and young trees have a round crown that turns into corymbiform as the tree ages.
- Flowers and cone:** Male flower cones are mostly in clusters and yellow in color. Female cones have chestnut colored woody flakes, and round to oval shape become mature in two to three years. Its seeds are publicly known as "çam fıstığı" (pine kernel).

Pinus pinea

Prunus serrulata 'Kanzan'

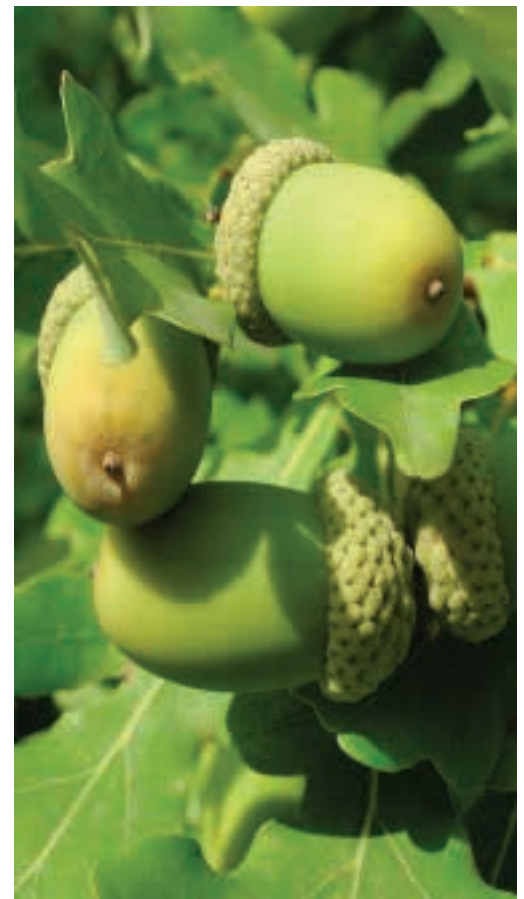
- Overall distribution:** It is endemic to Japan, China, and Korea.
- Distribution in Turkey:** They do not grow naturally in the wild. As an ornamental plant with conspicuous flowers used in parks and gardens
- Appearance:** They are long- or short-growing shrubs that can grow to a height of 7 to 10 meters, have vase-shaped wide crown, and upwards branches that become pendulous as the plant ages.
- Flowers and cone:** The flowers are dense and twined, and pink in color, and produced in racemose clusters of two to five together. The blossoms appear in early May, and are dark red.



Prunus serrulata 'Kanzan'

Quercus spp.

- Overall distribution:** The tree has 200 species native to the temperate and subtropical regions of the Northern Hemisphere, including North and Central America, Colombia, Eurasia, and North Africa.
- Distribution in Turkey:** 18 species are endemic to Turkey, and exist almost everywhere, depending on the species.
- Appearance:** They are deciduous or evergreen trees and bushes. The trunk is often vertically fissured in the form of strips, sometimes corky or smooth.
- Flowers and fruit:** The fruit is a nut called acorn or oak nut ("palamut" or "pelit" in Turkish) borne in a cup-like structure known as a cupule, globe, spindle, bullet, or ellipsoid, and ripens in one to two years after pollination. The seed is nutritious for wild animals.





Quercus spp.



Salix spp.

- Overall distribution:** Platanus has 300 taxons native to the regions with moderate and cold climate in the Northern Hemisphere
- Distribution in Turkey:** Twenty two species are widespread in the wild. They are trees, or high or low-growing shrubs usually found in riverine settings.
- Appearance:** They are deciduous trees with pendulous branches, and can grow to e height of 20 meters.
- Flowers and fruit:** Inflorescence is in April. The flowers are arranged laterally in in the form of catkins. In some species, inflorescence starts before foliation. The yellow-red catkins are ovate. The fruit capsules are split open into two pieces.

Salix spp.

Syringa vulgaris

- Overall distribution:** Syringa vulgaris is endemic to Southeastern Europe.
- Distribution in Turkey:** It is not endemic to Turkey, but as an ornamental, cultivated in all over Anatolia for use in parks and gardens.
- Appearance:** They are deciduous shrubs or low-growing trees reaching 6 meters in height.
- Flowers and fruit:** Inflorescence varies between mid-spring to early summer, and the flowers have strong lilac fragrance, and grow in large terminal panicles 10-20 cm in length. The fruit capsule contains number of seeds. Solitary and double-flowered several hybrid forms, and numerous cultivars that produce colorful flowers are available.



Syringa vulgaris

Tilia spp.

- Overall distribution:** Tilia is native to Europe, Anatolia, and North America.
- Distribution in Turkey:** Three species of this tree are endemic to the West Black Sea, coastal Marmara, and North and Northeast Anatolia regions, and in the Taurus Mountains in Turkey. They are widely cultivated.
- Appearance:** They are high-growing deciduous trees with wide crown, and can reach to a height of 40 meters.
- Flowers and fruit:** The flowers are yellowish-white, scented, and pendulous, and the inflorescence period is from late June to early July. The flowers and pedicels are dense and hairy.





Tilia spp.

Viburnum spp.

- Overall distribution:** Viburnum is native to Europe, Mediterranean, Turkey, Caucasus, Siberia, China, Japan, and North Africa.
- Distribution in Turkey:** Viburnum is endemic to the Aegean region, and widely cultivated as an ornamental plant.
- Appearance:** They are high-growing shrubs that can reach to a height of 5 meters. There are some deciduous varieties. They have glossy green leaves.
- Flowers and fruit:** The flowers are white, and are produced in corymbs with two to three pedicles. The fruit is a drupe containing seeds.



Viburnum spp.



Wisteria sinensis

- Overall distribution:** Wisteria is native to China.
- Distribution in Turkey:** They do not exist in the wild. They have conspicuous flowers, and widely cultivated as ornamental plants in landscaping.
- Appearance:** These are deciduous, woody, clinging plants, and can reach to a height of 8 to 10 meters.
- Flowers and fruit:** Inflorescence is in May and June before foliation, and the flowers are bluish purple, and produced on 15–30 cm racemes. The fruit is a thick velvety, bean-like pod with number of seeds. The seeds are toxic.

Wisteria sinensis





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