

USING SOME POME FRUIT TREES IN LANDSCAPE DESIGNS

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Abstract

Landscape; when viewed from a point of view, natural and cultural beings that are able to enter into the frame of view are brought together to form a fountain. The materials that make up the live decor of the areas consist of especially the large trees of the plant kingdom, shrubs, undergrowths, ivies, single annual, biennial or perennial herbaceous plants, that is, roots consist of onion, lumpy or rhizomaceous herbaceous plants, grass plants and water plants which can be kept on the ground continuously. Among these, wild and cultured forms of soft-seeded fruits constitute an important place. In this study, the functional and visual use of wild plants such as wild pear, pear, apple, quince and their wild forms in different landscape designs have been investigated. In plantation studies, plants can be used in esthetic, functional or both ways to be more effective. It can also be growth for economic reasons. Economically cultivated species are particularly high economic values. However, they are often used for esthetic purposes outside of commercial assets, such as in other fruit trees. For this reason, the most common uses are to take advantage of both fruit and to benefit from the visual effect of flowers and fruit.

Keywords: Landscape, pome fruits.

1. INTRODUCTION

Landscape (paysage) sentence from French is widely used in Turkish as a counterpart of English landscape (Ürgenç, 2000). In English, landscape words are a term used to express the appearance of any area and all of the parts that make up that view (Duncan, 1997). It contains everything in any open space. Mikesell (1968) stated that a definition that would constitute the basis for the present meaning of the landscape word is described after the 19th century and is described as a land or an area that can see a place with all the objects. Jackson has proposed a new definition after discussing the various meanings. According to Jackson (1984), landscapes are 'spaces created by man-made or altered that will serve or create infrastructure for our common existence'.

Landscape; history and present, link culture and nature, provide an environment for our lives. The disruptive relationship between man and nature has an important place in balancing and improving living conditions. Landscape design is; (such as parks, squares, pedestrian roads, coastal bands, botanical/zoological gardens, children's playgrounds, sports areas, parking lots etc.), natural vegetation potential and climate, soil conditions, morphological and geological structure, or factors, in order to meet the needs of the users. Between Science with art and man with nature are the most accurate, most effective and most sustained relationship building process; is both scientific and artistic and a natural phenomenon (Altincekic and Kart, 2007).

The major elements in urban and rural landscape design and planning work are the trees. Trees provide a sharp contrast to the structures (Aslanboga, 1982). These materials make up the live decor of the areas are classified in different sequences by different researchers according to their life span, their size, their form, their function and their plant characteristics. The design plants according to Korkut (2002) classify the plants according to the size of the crown they will receive during their lifetime; can be grouped as ground cover plants, trees, small trees and large trees. Yazgan et al. (2005) examined the design plants according to their sizes, forms, functions and plant characteristics in 5 groups. Design plants according to this classification; latifolium trees, shrubs and thicket, hedgerow trees, and conifers, locusts, single and perennial plants, climbers and herbaceous plants, and seasonal flowers.

The contributions and benefits of plants to urban ecology are versatile in landscape design studies. With its continuous green features, it has important contributions in urban and rural environment with prevention of air pollution, noise masking, wind, reduction of dust and gas effects, dynamic effect on urban form, transport accidents, improving climate conditions and aesthetic effects. Among these, wild and cultured forms of pome fruits constitute an important place. Ahlat (*Pyrus elaeagrifolia*), pear (*Pyrus* spp.), apple (*Malus* spp.), quince (*Cydonia* spp.) and their wild forms are preferred because of their functional and visual effects in different landscape designs. These trees, which are the dominant elements of the open and green areas that arise between the reinforced and quarried building masses of the cities, help to balance the functional and visual effects of the interaction between man and the environment (Booth, 1990; Celem and Sahin, 1997; Korkut, 2002; Yildirim, 2002).

In this study, it was investigated in plantation studies that in order to be functional and aesthetic or more effective, soft wood fruit trees such as ahlat, pear, apple, quince and their wild forms can be used from both sides. In addition, these species can be cultivated for economic reasons. Economically cultivated species are particularly high economic values. However, they are often used for aesthetic purposes outside of commercial assets as they are in other fruit trees. Therefore, the most common uses of the species are to take advantage of both their fruit and to benefit from the visual effects of flowers and fruit.

2. USE OF FRUIT TREES FOR AESTHETIC AND FUNCTIONAL PURPOSES

The plants improve the quality of the environment as well as adding beauty to the spaces they are used aesthetically and functionally. The versatile characteristics of vegetal material in urban areas are indispensable design elements of urban living environments (Yildirim, 2002). These features of the design plants can be grouped under two titles; the aesthetic characteristics of the plants and the functional characteristics of the plants.

2.1. Aesthetic Use of Fruit Trees

In some trees used for aesthetic purposes in landscape design studies, the effects of flowering, the visual effects of the fruits and the effects of creating deep and decorative appearance come to the forefront.

Flowering Effect: The most sought-after feature in plants used for aesthetic purposes is flower beauty. The plants, which are effective with their dense flowers, take a major role in the creation of aesthetic plant designs. The designs vary with the flowers the plants produce in different colors in different periods (Eroglu et al., 2005). The colors of the flowers vary according to the season and they give different effects on the place and they animate the monotone views of the cities (Yilmaz, 2006). *Malus floribunda* (ornamental apples) with its ornate flowers; some colors such as white, pink, red are very fragrant and create a very nice appearance in designs that are used with flowers

that open before the foliage in the spring. It can be a large grass area tree or street tree with excellent flowering. Because it has a large crown, it needs a lot of space, so it shouldn't be placed in areas close to buildings or roads. Can be used in single or small groups. On the other hand, ornamental pears with the flowers opening before the branches in springs, has pink, orange or red showy flowers. Following the flowering, leaves that open in bronze red color will later become dark green. These plants, which have attractive flowers and leaves throughout the spring, can also be used in interior landscape designs with flowered branches. The use of plants in intensive groups will increase their effectiveness. Solitary uses should be evaluated especially in residential gardens, and pendulous forms should be preferred for solitary use.

Visual Impact of Fruits: In some trees used for aesthetic purposes in landscaping designs, the effect of the fruits is foreground. Trees with colorful, large, ostentatious flowers and fruites from summer to autumn, breaks the monotony a bit on the green-colored tissue. These types of trees, which are very effective with fruit trees, can be used easily thanks to the colorful fruits like yellow, orange and red in order to create accentuated places due to fruit density and color and to give natural effects to urban places (Ozer et al., 2009).

Preventing Unwanted Smells: With its effective and beautiful smell of flowers, plants are especially suitable for use on urban spots, parks, walking axes and winds in house gardens. It can also be used to hide bad smells. It may be more appropriate to use it in intensive groups in order to provide effect by smelling or hide bad smells (Ozer et al., 2009).

Creating Depth and Decorative Appearance: Each plant has different visual effects and aesthetic values according to size, shape, color and texture. The plants create decorative appearance with branching, leaves, form, flowers and fruit. The sharp lines of modern architecture can be softened in this way. The plants that provide the effect of emphasis and focus with the decorative structure also make the individual feel much safer and happier by bringing the people who lost among the masses of the high structure in the cities to their own dimensions. The plants gain two features in the horizontal and vertical direction. Horizontally encloses the environment visually in open areas, integrate or complete. It completes the area as far as the branches can reach vertically. An area covered with plants, disrupts the effect of abandonment, covering the area with the contribution of leaves and branches.

2.2. Functional Use of Fruit Trees

In functional use, trees are also loaded with many functions such as soil protection, windbreaking, noise prevention, siege and border patrol, highway afforestation, prevention of air pollution by reducing dust and gas impacts, economic benefit from fruits, and contribution to wildlife (Urgenc, 1992).

Soil protection: Tree planting can ensure that poor and barren soils become rich and productive again. The positive effect of plants on preventing erosion and improving soil fertility is quite high. Trees with their broad branch and leaf structure break down the energies of natural external factors such as wind and rain, and they allow the soil to fall slowly and in small droplets, they protect soil with their roots from erosion and keep the soil for stabilization. Besides, they provide the continuity of biological activities under and around the soil and under the soil due to the shaded, hot, wind protected and humid areas that they create. These properties make them suitable for use on roadsides, slopes and rural areas (Ozer et al., 2009).

Wind Breaking: In general when you look at the qualities of the urban climate, it can be seen that the speed of the wind is greatly reduced and the wind direction is changing (Aslanboga, 1980). Fruit trees that are branched from the ground and have intense texture have good support and complementary plant characteristics, because they allow the wind to reduce the effect of the wind in

the formation of wind curtains both by promoting air movement and providing harmful wind protection. For this reason, they can be used in urban areas in personal gardens and in agricultural areas in conjunction with other plants in forming wind curtains (Ozer et al., 2009).

Noise Prevention: Noise pollution is one of the major ecological problems. The aesthetic, functional and ecological characteristics of the plants are examined together to reduce noise pollution. All of the leaf and branching properties, that is, the leaf measures, the shape, the color, the patterns of branching with the textures of the upper and lower surfaces all reveal the texture properties of the plants in their entirety (Korkut, 2002). Especially rough-textured, close-branched plants are significant in the selection of plants in the prevention of noise.

Siege and Border Formation: Some plants are used to set boundaries, especially in agricultural areas and private gardens, and to block the passage of people and animals into restricted areas. The spiky, dense textures and branching species from ground show good fence and siege characteristics.

Highway Afforestation: In vehicles, the speed of traffic is high, people do not have outside space in vehicles. The pedestrian space is either completely or visually separated from the vehicle space. The trees separate these spaces with other green elements (Aslanboğa, 1982). Some soft-seeded fruit trees are well-conceived and smoothly grown without the need for additional maintenance, making them suitable for use in highway afforestation work in the area. Such plants may be preferred as a transition element in highway studies particularly from rural areas to urban areas or urban to rural areas, they may be used to prevent headlamps in the refugees. Aesthetic criteria are also important in planting road trees. When road trees are planted at appropriate intervals, they contribute to the lines that determine the location or soften the lines. Trees planted at regular and even intervals strengthen the effect of the space.

Air Pollution Prevention: Air pollution in urban areas is one of the important factors that put human health in danger today. Certain green areas provide successful results in air pollution reduction applications. The effects of plants on air pollution are to consume CO₂ and produce O₂, to absorb dust, and to keep harmful substances in the gas. When air pollution in cities is accepted as 100%, this value decreases to 14.4% in parks and 31% in forested urban roads (against 100% acceptance of treesless roads). Thus, the rate of air filtering of trees is over 85% in parks and 70% in roads. Even when the trees are leafless, air filter effects are 60%. The most important aspect of green areas to reduce air pollution is to absorb air particulate matter (Celem, 1997). Speeding up afforestation work especially in urban areas should be accelerated in order to minimize the air pollution caused by motorists from the motor vehicles without warming up.

Economic Benefit from Fruits: Fruity plants also provide economic returns. Fruits are consumed in various forms such as food, beverages, jams, pickles, etc., as well as their domestic and international trade.

Contribution to Wildlife: Fruits that grow in the trees are contributing to the natural life with the feeding of many living things such as rabbits, birds, squirrels living in rural and urban areas. In addition, flowers are an important source for bees.

3. CONCLUSIONS AND SUGGESTIONS

In addition to being a source of environmental pollution, the building areas that multiply in parallel with the population increase in the cities are changing the climate of the city environment. On the other hand, the noise in the cities, the monotony in the color and the lack of aesthetics have negative effects on human psychology. It is inevitable that the conditions that do not conform to the nature of man gradually become dominant in the artificial environments formed by the urbanization realized

without regard to the relation between man and nature. In this respect, it is of great importance that we will benefit from the effects of green areas on improving the living conditions.

In urban and rural landscapes, woody plants, especially trees, have attracted the attention of people throughout history, have been transported thousands of miles away from Egypt before the new milestone and have been given new information on planting and maintenance of trees. Thereafter in the Middle Ages, botanical gardens and arboretums began to grow numerous exotic species, and this work was developed as much as time to enlarge the coverage of large parks and gardens in urban and rural areas as plantation and planting studies for various purposes (Urgenc, 1990).

Especially trees and shrubs have a multitude of contributions and benefits in urban and rural landscape planning work. In order to make the best use of plants, both functional and aesthetic properties must be well known. The designs made by knowing these features of the plants to be used are more effective both aesthetic and functional. In the landscape designs that are created by taking part of the fruits of the soft seeds and taking up the tasks of the trees, these plants are effective design and texture for all seasons and they are design plants with features such as space creation, separation of places, curtains, emphasis, color and texture effect have the opportunity to be evaluated for economic purposes in a supportive and economic life. Adaptation to urban environments is also easy for plants that are conscientious in terms of their growth wishes and climate requirements, so the adaptation problem will be abolished and an alternative tree will be available. The use of these plants is also important in terms of introducing new species into plant design studies. It is thought that the use of plants in cultivation and landscape designs will provide important contributions to plants.

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