

Investigation of Landscape Value of Medical Plants

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Abstract – Various aromatic plants grow in different geographical regions of the world. These plants have many features such as flavor, healing, therapeutic. In addition to these characteristics, their contribution to ecological balance is very high. Since the early ages, human beings have chosen to use the nutrients in nature and produce them in a planned way for feeding. It has also developed several methods to protect itself against disease agents. In particular, treatment of power in Turkey has significant potential for the presence of high and aromatic plants has led scientists to this work. In this study, landscape value of medical and aromatic plants were investigated. In the study, re-planting design was done on the photos taken from the study area. The design consists primarily of medicinal and aromatic plants. The designs were evaluated by the users in the survey. The results obtained are given in the scope of the study.

Keywords – Include at least 5 keywords or phrases

I. INTRODUCTION

Medicinal and aromatic plants; food, medicine, cosmetics and spices, which are used for many purposes and known to be used for similar purposes since the beginning of human history (Acıbuca, Bostan Budak 2018). From past to present, people have benefited from plants to feed, shelter, warm up, heal wounds and treat illnesses. B.C. It was found that there were 250 plants used by humans in the treatments in the 5000s. The Hittites, the Egyptians, the Sumerians, the Assyrians and the Mesopotamians have been treated with plants for years. The introduction of medicines over time has led to a reduction in the use of medicinal aromatic plants. After the 1900s, the demand for natural products increased as people discovered the side effects of synthetic drugs and became aware of the harmful effects of synthetic substances in food and beverages to human health (Göktaş, Gıdık 2019). While some of these plants are collected from nature, some of them are cultivated and produced. However, a significant portion of the plants used for treatment are collected from nature (Acıbuca, Bostan Budak 2018). Our country is one of the richest countries in the world in terms of flora. The richness of a country in terms of flora; it is expressed by the fact that there are too many species growing in that country, the spread of plants and various vegetation types (Güllü, Öcal 2016). Most of the medicinal and aromatic plants, besides these properties, are valuable for flower and fruit beauties, form characteristics and flower colors in spring and autumn leaf colorations which are important for landscape architecture. These plants, which have many ecological, aesthetic and functional potentials, are very important for landscape design, planning and planting activities (Müberra, Bekar, Güneroğlu 2018).

II. MATERIALS AND METHOD

In this study, the usage areas of plants with medicinal value in landscape architecture were examined. 5 samples were designed with planting design principles. These examples were questioned in terms of basic design principles. Plants with medicinal and aromatic values were used in the samples. This detail was explained to the survey participants. They were asked to score accordingly.

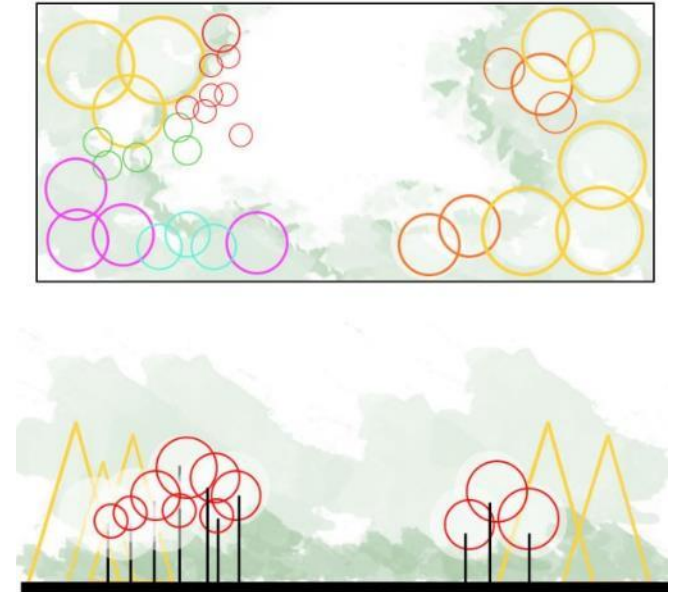


Fig. 1 Design pattern of no:1

Table. 1 Taxa used in design no 1

| Latin name | Turkish name | Symbolic color |
|---------------------------|---------------|----------------|
| 1-Gingko biloba | Mabet ağacı | Yellow |
| 2-Aesculus hippocastaneum | At kestanesi | Pink |
| 3- Vaccinum myrtillus | Yaban mersini | Cyan |
| 4- Rubus idaeus | Ahududu | Red |
| 5- Rosa sp. | Gül | Light Green |
| 6- Rosmarinus officinalis | Biberiye | Dark Green |
| 7- Lavandula officinalis | Lavanta | Light Green |

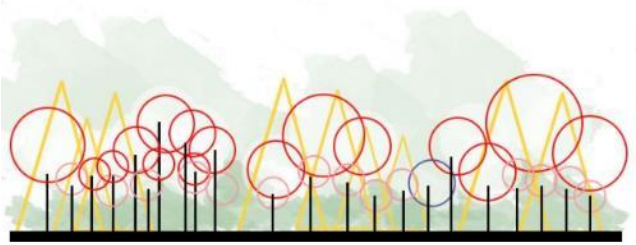
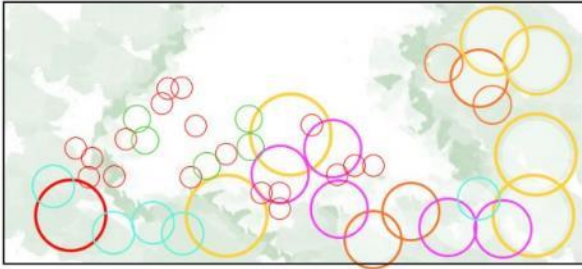


Fig. 2 Design pattern of no:2

Table. 2 Taxa used in design no 2

| Latin name | Turkish name | Symbolic color |
|--------------------------|--------------|----------------|
| 1- Asparagus officinalis | Kuşkonmaz | Yellow |
| 2- Rosa canina | Kuşburnu | Pink |
| 3- Rubus idaeus | Ahududu | Cyan |
| 4- Zea mays | Mısır | Red |
| 5- Allium cepa | Soğan | Light Green |
| 6- Jasminium fruticans | Yasemin | Dark Green |
| 7- Helianthus annuus | Ayçiçeği | Light Green |

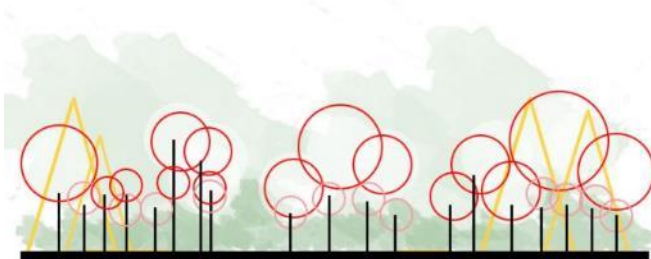
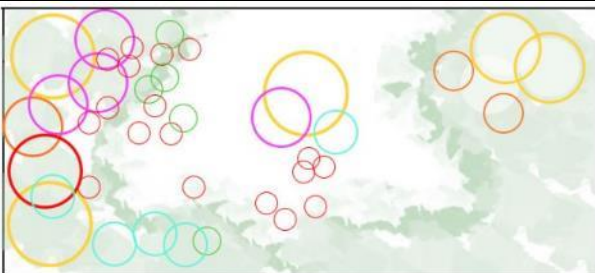


Fig. 3 Design pattern of no:3

Table. 3 Taxa used in design no 3

| Latin name | Turkish name | Symbolic color |
|----------------------|--------------|----------------|
| 1- Betula pendula | Huş | Yellow |
| 2- Ceratonia siliqua | Keçiboynuzu | Pink |
| 3- Citrus aurantium | Turuç | Cyan |
| 4- Plantago major | Sinirliot | Red |
| 5- Citrus limon | Limon | Light Green |
| 6- Cornus sanguinea | Kızılçik | Dark Green |
| 7- Malus slyvestris | Elma | Light Green |

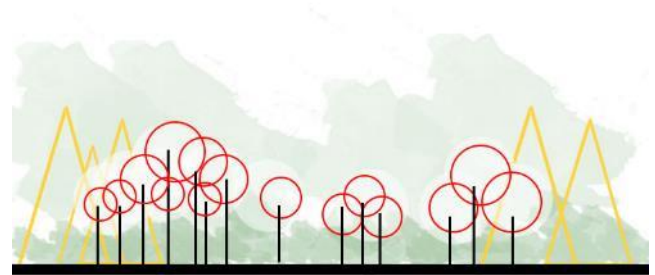
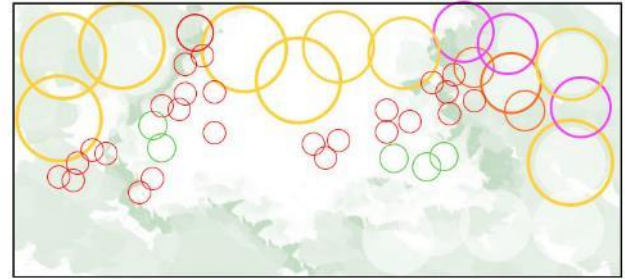


Fig. 4 Design pattern of no:4

Table. 4 Taxa used in design no 4

| Latin name | Turkish name | Symbolic color |
|------------------------|--------------|----------------|
| 1- Fraxinus excelsior | - | Yellow |
| 2- Laurus nobilis | Defne | Pink |
| 3- Morus nigra | Karadut | Cyan |
| 4- Persea gratissima | Avokado | Red |
| 5- Phoenix dactylifera | Hurma | Light Green |
| 6- Anethum graveolens | Dereotu | Dark Green |
| 7- Bellis perennis | Koyun gözü | Light Green |

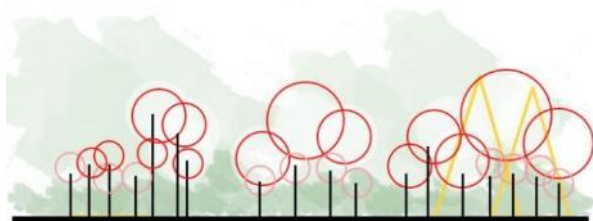
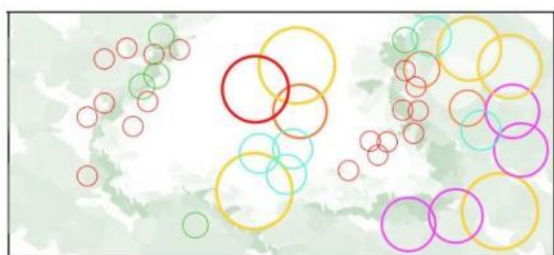


Fig. 5. Design pattern of no:5

Table. 5 Taxa used in design no 5

| Latin name | Turkish name | Symbolic color |
|-----------------------|--------------|----------------|
| 1- Althaea rosea | Gülhatmi | Yellow |
| 2- Salix alba | Ak söğüt | Pink |
| 3- Sorbus domestica | Üvez | Cyan |
| 4- Tilia americana | Ihlamur | Red |
| 5- Quercus infectoria | Meşe | Light Green |
| 6- Capsella sativa | Marul | Dark Green |
| 7- Tilia argentea | Ihlamur | Light Green |

III. FINDINGS

5 drawings designed in the scope of this study were designed by users (Figure 1-2-3-4-5). Evaluation results of these drawings in terms of basic design principles are given in Table 6-7-8-9. A total of 100 participants participated in the surveys.

Table. 6 Percentages of design pattern 1 in terms of basic design principles.

| Number : 1 | | |
|--------------------|-----------|------------|
| | Frequency | Percentage |
| Sovereignty | 60 | 60 |
| Balance | 20 | 20 |
| Unity | 8 | 8 |
| Emphasis | 12 | 12 |
| Toplam | 100 | 100 |

Table. 7 Percentages of design pattern 2 in terms of basic design principles.

| Number : 2 | | |
|----------------|-----------|-----------|
| | Frekans | Yüzde |
| Sovereignty | 14 | 14 |
| Balance | 56 | 56 |
| Unity | 21 | 21 |
| Emphasis | 9 | 9 |
| Toplam | 100 | 100 |

Table. 8. Percentages of design pattern 3 in terms of basic design principles.

| Number : 3 | | |
|-----------------|-----------|-----------|
| | Frekans | Yüzde |
| Sovereignty | 14 | 14 |
| Balance | 14 | 14 |
| Unity | 26 | 26 |
| Emphasis | 46 | 46 |
| Toplam | 100 | 100 |

Table. 9. Percentages of design pattern 4 in terms of basic design principles.

| Number : 4 | | |
|--------------------|-----------|-----------|
| | Frekans | Yüzde |
| Sovereignty | 75 | 75 |
| Balance | - | - |
| Unity | 13 | 13 |
| Emphasis | 12 | 12 |
| Toplam | 100 | 100 |

Table. 10. Percentages of design pattern 5 in terms of basic design principles.

| Number : 5 | | |
|----------------|-----------|-----------|
| | Frekans | Yüzde |
| Sovereignty | 15 | 15 |
| Balance | 52 | 52 |
| Unity | 15 | 5 |
| Emphasis | 18 | 18 |
| Toplam | 100 | 100 |

Among the designs, the “sovereignty” parameter is among the highest results in the design pattern no. Other results are; balance (20%), emphasis (12%) and unity (8%) (Table 6).

The highest parameter of design no. 2 is 56% “balance” parameter. The parameters of unity (21%), sovereignty (14%), and emphasis (9%) were followed (Table 7).

The highest parameter of design 3 was “emphasis” (4%). Then, unity (26%), sovereignty (14%) and balance (14%) were respectively (Table 8).

The highest parameter of design 4 was “sovereignty” (75%). Then, unity (13%) and emphasis (12%) respectively. The balance parameter was not preferred at all.

The highest parameter of design 5 was the balance parameter (52%). Then, respectively, emphasis (18%), sovereignty (15%), unity (15%) were the parameters.

When all the designs were evaluated, the “sovereignty” parameter came to the fore most. Other parameters have almost proportional to these parameters. In only 1 design, the “balance” parameter was not preferred by any user.

CONCLUSION

Within the scope of this study, 5 designs were drawn. Medical and aromatic plants are used in the designed drawings. The final designs were explained and the characteristics of the plants were surveyed. The survey parameters was the most prominent in the survey results. Other parameters were preferred to be close to the dominance parameter. It is anticipated that there is a positive link between basic design principles and medicinal and

aromatic plants. Total percentages of the parameters are given in Table 11.

Table. 11. Total percentages obtained from parameters

| Percentages of Design Patterns | | | | | |
|---------------------------------|------------|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 |
| Sovereignty | 15 | 14 | 14 | 75 | 15 |
| Balance | 52 | 56 | 14 | - | 52 |
| Unity | 15 | 21 | 26 | 13 | 15 |
| Emphasis | 18 | 9 | 46 | 12 | 18 |
| Total Percentages of Parameters | | | | | |
| Egemenlik | 133 | | | | |
| Denge | 174 | | | | |
| Birlik | 90 | | | | |
| Vurgu | 102 | | | | |

These results show that we should pay attention to the use of medicinal and aromatic plants. With this understanding, which is one of the most sustainable approaches, we should give priority to these taxa especially in environmental design projects. Because medicinal and aromatic plants have both aesthetic and ecological and functional aspects. Consequently, these additives make those taxa preferable.

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