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EDIBLE WOODY SPECIES IN SOME GREEN AREAS OF BUCHAREST

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Abstract

Over time, urbanization has never excluded people's habit of growing edible plants near their homes. Despite the challenges of growing them in urban spaces, there is an increasing trend to have edible plants in cities around the world. Woody species from parks, private gardens, streets, and green areas near residential buildings were investigated for their edible qualities in Bucharest. The results showed a total number of 62 edible species of trees and shrubs present in the green areas studied. Edible species represented over 45% of the total species near residential buildings and private gardens. Most of the species were able to produce flowers/fruits under both climatic and soil conditions in Bucharest. A clear tendency of the population to plant near their homes new edible species for Romania, such as Ficus carica, Punica granatum, Actinidia chinensis, or Aronia melanocarpa, was remarked. Even though some of these do not produce suitable fruits for consumption, the increased interest of people in growing edible species suggests that landscape architects may consider these species and design more edible landscapes in the future.

Key words*: edible ornamentals, fruiting trees and shrubs, gardens, parks, streets, temperate climate.*

INTRODUCTION

While UN statistics (2025) predict an increase in the urban population to 70% of the world's population in 2050, today there are concerns worldwide about maintaining the quality of life in cities by adopting practices and policies regarding the expansion and protection of green infrastructure in cities (Ashinze et al., 2024). Urbanization, which attracts progressively more people through the amenities offered, such as better access to well-paid jobs, healthcare, infrastructure, and education (Damon, 2011), tends to disconnect individuals from nature, which can have a negative impact on their health (Soga & Gaston, 2016; Sibthorpe & Brymer, 2020; Bashan et al., 2021). For this reason, many cities encourage community gardens, which not only reconnect people to nature, but also improve dietary habits (Twiss et al., 2003; Nova et al., 2018; Kelly & Brännlund, 2025), develop better relationships between neighbours (Glover et al., 2005; Firth et al., 2011; Bice et al., 2018) and facilitate cultural exchanges and traditions (Agustina & Beilin, 2012; Pearsall et al., 2017; Mejia et al., 2020). Furthermore, people involved in community gardens become more aware of urban ecological problems and are interested in adopting environmental protection and resource-conservation practices (Janowska et al., 2022).

In large cities, such as Bucharest, community gardens are difficult to implement due to the lack of space. Compact building models and the need to expand parking lots result in small-sized common public green spaces, designed with ornamental plants. In these cases, edible landscaping can be an alternative to community gardens, by using more edible plants in public green space design projects. Implementing these edible plants in the urban landscape does not mean less attractiveness, but an intelligent selection of species with both aesthetic value and edible qualities, which can satisfy not only human needs but also flora and fauna (Rupprecht et al., 2023). Studies have shown that edible landscapes, compared with those consisting strictly of ornamental plants, generate benefits such as energy and water savings, better nutrition, improved food safety, and a community with a healthier lifestyle (Neal, 2011; Çelik, 2017; Karaca, 2019).

Converting the existing conventional landscape into an edible landscape can be challenging. Urban trees fulfil many functions and the selection of species for different green spaces is based on criteria of resilience and sustainability (Sjöman et al., 2017; Anisimova, 2023).

Therefore, it is essential to investigate edible plant species to determine whether they meet selection criteria to tolerate the growing conditions in urban cities. Furthermore, pollution can be restrictive for some edible plants. Von Hoffen and Säumel (2014) showed that fruits (walnut, hazel, ginkgo, blackberry, sea buckthorn, elder, apple, Mirabelle plum and plum) produced in green spaces in Central Berlin (Germany) have a significantly lower heavy metal content than vegetables, and their consumption does not pose a health risk as long as the placement of the fruit trees is considered. Various other researchers have reported that vegetables and fruits harvested from urban green spaces accumulate heavy metals differently (Samsøe-Petersen et al., 2002; Hough et al., 2004; Antisari et al., 2015; Khalilnezhad et al., 2024). Site-specific risk evaluation and selection of plants are key factors in minimizing contamination. Consequently, edible species cannot completely replace ornamental species in urban green spaces, due to their decontamination function, one of the most important for air and soil quality in cities, which only the latter can fulfil.

Even if pollution is not a concern, edible species should be evaluated for their impact on population comfort in terms of allergy risk, litter and fruit drop, slippery surfaces, and insects (Hajzeri & Kwadwo, 2019).

In this study, we investigate several green spaces in Bucharest, Romania, such as parks, private gardens, streets and green areas near residential buildings, to assess the diversity of woody species and to highlight edible plants. The results will complete the knowledge about edible species in Bucharest and the trends of its various green areas as they convert into edible landscapes.

MATERIALS AND METHODS

Investigations on edible woody species from different green spaces in Bucharest (44°24'N, 26°05'E) were carried out between 2023 and 2025. The city, which is located on a plain area in southern Romania, has a temperate climate, but dry and thermally unstable, with heatwaves in summer and frosts in winter.

Public parks, private gardens, street plantations, and green areas of residential buildings situated in the city centre, District 1 and District 6 were selected for study (Figure 1).

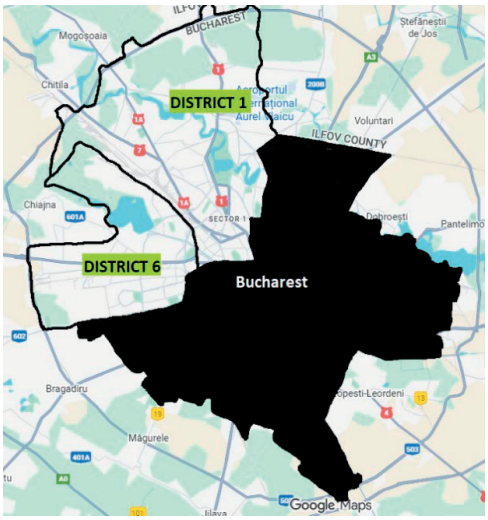

Figure 1. Map of Bucharest highlighting the two districts in which green spaces were studied (modified from Google Maps, 2026)

These two districts cover almost half (43.9%) of Bucharest's area and include various old and new green areas, both public and private, suitable for a study on edible species. District 1 is the greenest area of Bucharest, which includes forested areas, public parks, and private gardens, with significant importance for air quality and the urban microclimate. Old and new neighbourhoods, most of which have small buildings (2-4 floors) are accompanied by private or common public gardens (Figure 2).



Figure 2. Appearance of buildings in District 1

District 6 is densely built and has the smallest green area in Bucharest, represented by small

public parks and green areas of residential buildings, most of which have 10 floors (Figure 3).



Figure 3. Appearance of buildings in District 6

A total of 8 public parks, 90 private gardens, 12 streets, and 27 green areas of residential buildings were studied for edible woody species (Figure 4). All woody species with flowers, fruits, or seeds that can be eaten raw or prepared were considered. No herbaceous edible species were identified.

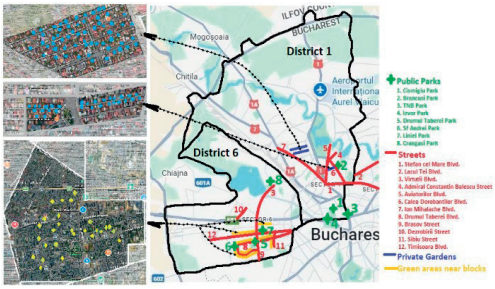

Figure 4. Studied areas
(modified from Google Maps, 2026)

Chi-squared tests were applied to compare native versus non-native edible species in green areas, as well as the difference between the number of edible and non-edible species and the number of edible and non-edible woody plants.

RESULTS AND DISCUSSIONS

Edible species were found in all the green areas studied. The plant inventory revealed the existence of 60 species and 2 hybrids of edible trees and shrubs, from 24 botanical families in the studied public parks, private gardens, streets, and green areas of residential buildings in Bucharest (Table 2). The largest group was represented by species of *Rosaceae* - 30.6% (Table 1). Edible species diversity was higher in green areas near residential buildings and private gardens.

Table 1. Distribution of edible species by botanical families

Botanical Family	Total no. of species	Share of total (%)	No. of species in different types of green areas			
			Public	Private	Street plant	Green
Actinidiaceae	1	1.61		1		
Berberidaceae	2	3.22	2	1		2
Betulaceae	2	3.22	2	1	1	2
Cannabaceae	2	3.22				2
Caprifoliaceae	1	1.61		1		
Cornaceae	1	1.61	1			1
Cupressaceae	3	4.83	2	1		1
Ebenaceae	1	1.61		1		
Elaeagnaceae	1	1.61	1			
Fabaceae	4	6.45	4	1	2	4
Fagaceae	1	1.61				1
Grossulariceae	1	1.61		1		
Juglandaceae	2	3.22	1	1	1	2
Lamiaceae	2	3.22		2	1	2
Lythraceae	1	1.61		1		1
Malvaceae	3	4.83	3	3	3	3
Moraceae	3	4.83	2	2	2	3
Oleaceae	1	1.61	1	1	1	1
Pinaceae	5	8.06	4	2	5	4
Rosaceae	19	30.64	7	17	3	14
Salicaceae	3	4.83	2	1		2
Taxaceae	1	1.61	1			
Viburnaceae	1	1.61	1			1
Vitaceae	1	1.61		1		1
Total	***62***	***100***	***34***	***39***	***21***	***48***

Non-native species were more frequent than native ones in all the green spaces (Figure 5), but the differences were not significant ($\chi^2 = 3.061$; $p = 0.382$).

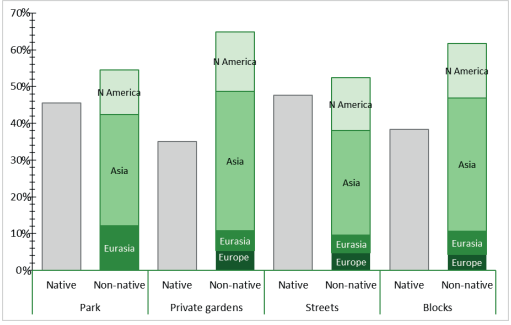

Figure 5. Distribution of edible species by their origin

It was remarked that most of the non-native species originate from Asia.

Table 1. Inventory of edible species and hybrids in some green areas of Bucharest

Scientific name*	Familiy	Origin	Edible part				Food uses**
			leaf	flower	fruit/ seed	other	
Abies alba	Pinaceae	native	+				tea, syrup, as a flavouring
Abies nordmanniana	Pinaceae	Eurasia	+				tea, syrup
Actinidia chinensis var. *deliciosa*	Actinidiaceae	Asia			+		raw, juice, dried, syrup, jam, desserts, salads
Amelanchier canadensis	Rosaceae	N America			+		raw, dried, desserts, as a flavouring
Aronia melanocarpa	Rosaceae	N America			+		raw, juice, dried fruits, tea, syrup, jam, wine
Berberis aquifolium	Berberidaceae	N America		+	+		flower: salads, lemonade; fruits: raw, dried, jam, jelly, cakes, beverages
Berberis bealei	Berberidaceae	Asia			+		raw, cakes, jelly
Betula pendula	Betulaceae	native	+			sap	tea, salads; sap – raw, syrup
Castanea sativa	Fagaceae	Eurasia			+		roasted, dried, desserts, bread, soups, as a coffee substitute
Celtis australis	Cannabaceae	native			+		raw, desserts
Celtis occidentalis	Cannabaceae	N America			+		raw, jelly
Cercis siliquastrum	Fabaceae	Eurasia		+			raw, salads, tea
Chaenomeles speciosa	Rosaceae	Asia			+		raw, dried, tea, syrup, jam, jelly, as a flavouring
Cornus mas	Cornaceae	native			+		raw, juice, syrup, jam, alcoholic beverages, pickles
Corylus colurna	Betulaceae	native			+		raw, roasted, desserts, cakes
Crataegus monogyna	Rosaceae	native			+		tea, salads, jam, jelly, sauces
Cydonia oblonga	Rosaceae	Asia			+		raw, jam, desserts, dish, beverages
Diospyros virginiana	Ebenaceae	N America	+		+		leaf: tea; fruit: raw, dried, cakes, sauces
Elaeagnus angustifolia	Elaeagnaceae	Eurasia			+		raw, tea, soup, jelly
Ficus carica	Moraceae	Eurasia			+		raw, dried, jam, salad, desserts, cakes, dishes
Gleditsia triacanthos	Fabaceae	N America			+		raw, drinks
Hibiscus syriacus	Malvaceae	Asia		+			raw, salads, dried, tea, cakes, dishes
Juglans nigra	Juglandaceae	N America			+	sap	raw, roasted, cakes, desserts, dishes
Juglans regia	Juglandaceae	Asia			+		ras, drive, roadster, salade, desserts, cakes, jam, beurrages, dises
Pruniers haschischine	Cupressaceae	Asia			+		as a flavouring
Juniperus horizontalis	Cupressaceae	N America			+		as a flavouring
Juniperus virginiana	Cupressaceae	N America			+		as a flavouring
Lavandula angustifolia	Lamiaceae	Europe		+			tea, cakes, desserts, as a flavouring
Lonicea japonica	Caprifoliaceae	Asia		+			tea, syrup
Malus baccata	Rosaceae	Asia			+		raw, jam, jelly, dried, dishes
Malus domestica	Rosaceae	Asia			+		ras, juive, drive, cakes, desserts, salade, beurrages, dises
Malus x *floribunda*	Rosaceae	hybrid			+		jam, jelly, sauces, beverages
Horus galba	Moraceae	Asia			+		ras, juive, drive, te, jam, Kelly, cakes
Morus nigra	Moraceae	Asia			+		raw, juice, dried, tea, jam, jelly, cakes, beverages
Picea abies	Pinaceae	native	+				tea, syrup, as a flavouring
Pinus nigra	Pinaceae	native	+				tea, syrup, as a flavouring
Pinus sylvestris	Pinaceae	native	+				tea, syrup, as a flavouring
Prunus amygdales	Rosaceae	Asia			+		ras, roadster, salade, fluor, mil, butter, desserts, cakes, dises,
Prunes harmonica	Rosaceae	Asia			+		raw, dried, juice, jam, jelly, desserts, cakes, dishes, beverages
Prunus vivarium	Rosaceae	native			+		raw, dried, juice, jam, jelly, desserts, cakes, dishes, beverages
Prunus classifiera	Rosaceae	native			+		raw, jam, jelly, cakes, sauces, syrup, dishes, beverages
Prunus crasseuse	Rosaceae	Asia			+		raw, dried, juice, jam, jelly, desserts, cakes, dishes, beverages
Prunus domestica	Rosaceae	Asia			+		raw, dried, juice, jam, jelly, desserts, cakes, dishes, beverages
Prunus persica	Rosaceae	Asia			+		ras, drive, juive, jam, Kelly, desserts, cakes, salade
Punica granatum	Lythraceae	Asia			+		ras, juive, syrphe, te, salade, sauces, jam, beurrages, desserts, cakes, dises
Pyracantha coccinea	Rosaceae	Eurasia			+		Kelly, sauces, jam
Parus communie	Rosaceae	native			+		ras, juive, drive, jam, Kelly, cakes, desserts, salade, beurrages, dises
Ribes nigrum	Grossulariceae	native			+		raw, juice, syrup, dried, sauces, cakes, desserts, beverages
Robinia pseudoacacia	Fabaceae	N America		+			raw, tea, fried, cakes, jam
Rosa canina	Rosaceae	native			+		raw, tea, syrup, jam, jelly, drinks, beverages
Rosa hybrid a	Rosaceae	hybrid		+			tea, syrup, dried, jam, jelly, desserts, cakes, dishes, sauces
Salvia rosmarinus	Lamiaceae	Europe	+				tea, as a flavouring
Sambucus nigra	Viburnaceae	native		+	+		flower: tea, lemonade, syrup, fried; fruit: jam, jelly, sauces, beverages
Salix alba	Salicaceae	native	+				tea
Salix babylonica	Salicaceae	Asia	+				tea
Salix cinerea	Salicaceae	native	+				salads, soups, stews, flour
Styphnolobium japonicum	Fabaceae	Asia		+			tea, dried, fried, salads, dishes
Syringa vulgaris	Oleaceae	native		+			tea, syrup, drinks, desserts, jelly
Tilia platyphyllos	Malvaceae	native	+	+	+	sap	leaf: salads, dishes; flower: tea, jam, jelly; sap: raw, syrup; fruit: chocolate substitute
Tilia tomentosa	Malvaceae	native	+	+			leaf: salads, dishes; flower: tea, desserts, drinks
Torreya nucifera	Taxaceae	Asia			+		raw, roasted
Vitis vinifera	Vitaceae	native	+		+		leaf: dishes; fruit: raw, dried, juice, desserts, drinks, beverages

*Source of data: POWO, 2026
**Source of data: PFAF, 2026

This result is not surprising, as most non-native species in Europe originate from Asia (Roques et al., 2020). Woody species from Asia have been introduced over the years due to climatic similarities and low soil requirements.

A substantial part of the identified species (67.7%) has edible fruits, and most of them can be eaten raw (83.3%). Several species of trees and shrubs (12.9%) have multiple edible parts, such as: *Berberis aquifolium* - flowers and fruits, *Betula pendula* - young leaves and sap, *Diospyros virginiana* - leaves and fruits, *Juglans nigra* - seeds and sap, *Sambucus nigra* - flowers and fruits, *Tilia platyphyllos* - leaves, flowers, fruits, and sap, *Tilia tomentosa* - leaves and flowers, and *Vitis vinifera* - leaves, fruits, and seeds.

Significant differences (χ^2 = 12.316; p = 0.006) between edible and non-edible species in different types of green area were observed (Figure 6).

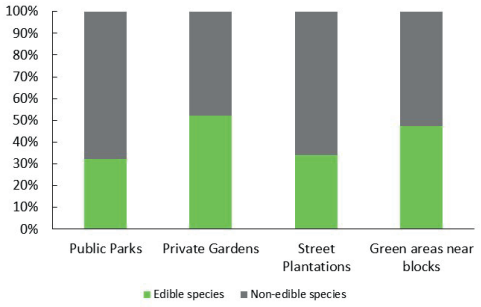

Figure 6. Share of edible species in different types of green areas in Bucharest

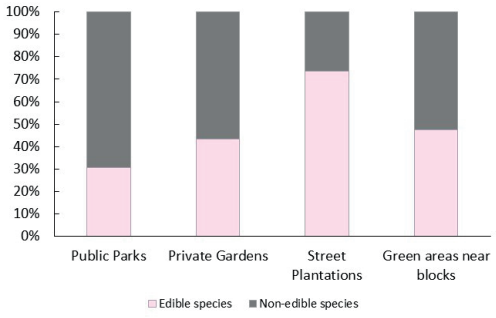

Figure 7. Share of edible trees and shrubs individuals in different types of green areas in Bucharest

Edible species represented over 45% of the total species in private gardens and green areas near blocks. Also, the difference between the number of edible and non-edible woody plants (Figure 7) was significant (χ^2 = 38.81; p = 0.00001). The lowest number of edible plants was observed in public parks and the highest in street plantations. On streets and boulevards, the edible part of most species was the flower or inflorescence (Figure 8).



Figure 8. Distribution by edible part of plants in different types of green areas in Bucharest

This result was expected because fruit-bearing species are usually avoided, or sometimes even prohibited, in city street plantations for reasons of cleanliness and safety. Therefore, tree species with flowers or decorative leaves are preferred. Fruitless cultivars can also be an alternative, as they have attractive flowers, such as *Malus* (Romer et al., 2003) or leaves, such as *Morus* (Rohela et al., 2025).

In public parks and private gardens, edible species were represented by a larger number of trees and shrubs with edible fruits (Figure 8). Some of these edible species, such as *Cydonia oblonga*, *Malus domestica*, *Prunus armeniaca*, *Prunus avium,* or *Prunus cerasus*, also have decorative leaves (Melinescu & Cosmulescu, 2025).

The species with edible fruits in private gardens were more varied, even if the number of plants was smaller. In contrast, public parks contained only a few species, such as *Prunus cerasifera*, *Berberis aquifolium*, *Pyracantha coccinea,* and *Cornus mas*, but in large numbers of individuals. Although all of these species produce fruits in the city's climatic and soil conditions, only *Prunus cerasifera* and *Cornus mas* are popular and consumed by Romanians. The explanation is that native, wild species, such as these, have been tested and experimented with for many years in Balkan cuisines (Nedelcheva, 2013).

Table 3. Distribution of edible species and hybrids by type of green areas

Scientific name*	Common name	No. individuals				Total plants
		Public Parks	Private Gardens	Street plantations	Green area near blocks	
Abies alba	Silver fir	27	12	1	5	45
Abies nordmanniana	Nordmann fir	11	-	6	-	17
Actinidia chinensis var. *deliciosa*	Kiwi	-	12	-	-	12
Amelanchier Canadensis	Canadian serviceberry	-	11	-	-	11
Aronia melanocarpa	Black chokeberry	-	7	-	2	9
Berberis aquifolium	Oregon grape	172	3	-	21	196
Berberis bealei	Leatherleaf mahonia	11	-	-	5	16
Betula pendula	Silver birch	108	24	14	17	163
Castanea sativa	Sweet chestnut	-	-	-	2	2
Celtis australis	European nettle tree	-	-	-	1	1
Celtis occidentalis	Common hackberry	-	-	-	2	2
Cercis siliquastrum	Judas tree	24	-	-	5	29
Chaenomeles speciosa	Flowering quince	-	13	-	4	17
Cornus mas	Cornelian cherry	116	-	-	2	118
Corylus colurna	Turkish hazel	14	-	-	3	17
Crataegus monogyna	Hawthorn	33	-	-	11	44
Cydonia oblonga	Quince	-	14	-	3	17
Diospyros virginiana	Common persimmon	-	3	-	-	3
Elaeagnus angustifolia	Russian olive	22	-	-	-	22
Ficus carica	Fig	-	18	-	9	27
Gleditsia triacanthos	Honey locust	-	-	5	16	21
Hibiscus syriacus	Rose of Sharon	51	12	32	17	112
Juglans nigra	Black walnut	-	-	-	4	4
Juglans regia	Walnut	14	6	2	18	40
Juniperus chinensis	Chinese juniper	8	-	3	-	11
Juniperus horizontalis	Creeping juniper	116	-	22	-	138
Juniperus virginiana	Eastern redcedar	27	3	-	1	31
Lavandula angustifolia	Lavender	-	68	4346	38	4452
Lonicea japonica	Japanese honeysuckle	-	15	-	20	35
Malus baccata	Siberian crab apple	3	-	-	7	10
Malus domestica	Apple	-	12	-	14	26
Malus x *floribunda*	Japanese flowering crabapple	1	3	-	-	4
Morus alba	White mulberry	8	-	5	2	15
Morus nigra	Black mulberry	20	3	2	12	37
Picea abies	Norway spruce	-	9	1	1	11
Pinus nigra	Black pine	198	-	26	24	248
"Pinus sylvestris	Scots pine	89	-	6	2	97
Prunus amygdalus	Almond	-	6	-	-	6
Prunus armeniaca	Apricot	-	9	-	5	14
Prunus avium	Sweet cherry	-	22	-	-	22
Prunus cerasifera	Cherry plum	201	18	51	38	308
Prunus cerasus	Sour cherry	-	15	1	4	20
Prunus domestica	Plum	-	5	-	1	6
Prunus persica	Peach	-	9	-	3	12
Punica granatum	Pomegranate	-	5	-	4	9
Pyracantha coccinea	Scarlet firethorn	159	16	-	-	175
Pyrus communis	Pear	8	12	-	2	22
Ribes nigrum	Black currant	-	9	-	-	9
Robinia pseudoacacia	Black locust	78	7	14	28	127
Rosa canina	Dog rose	7	2	7	2	18
Rosa hybrida	Garden rose	-	13	-	10	23
Salvia rosmarinus	Rosemary	-	8	-	2	10
Sambucus nigra	Elder	19	-	-	6	25
Salix alba	White willow	24	-	-	1	25
Salix babylonica	Weeping willow	46	-	-	12	58
Salix cinerea	Grey willow	-	3	-	-	3
Styphnolobium japonicum	Japanese pagoda tree	14	-	-	11	25
Syringa vulgaris	Common lilac	47	45	4	13	109
Tilia platyphyllos	Large-leaved linden	159	3	263	54	479
Tilia tomentosa	Silver linden	208	3	504	64	779
Torreya nucifera	Kaya	1	-	-	-	1
Vitis vinifera	Common grapevine"	-	21	-	15	36
Total		**2044**	**479**	**5315**	**543**	**8381**

Therefore, non-native ornamental species require time to become known and used as food. Eleven edible species were inventoried (Table 3) in all four categories of green areas studied: *Abies alba*, *Betula pendula*, *Hibiscus syriacus*, *Juglans regia*, *Morus nigra*, *Prunus cerasifera*, *Robinia pseudoacacia*, *Rosa canina*, *Syringa vulgaris*, *Tilia platyphyllos,* and *Tilia tomentosa*. All these species also have excellent qualities for urban conditions and can fulfil multiple functions (shading, masking unattractive views, windbreaks, reducing noise, or supporting wildlife).

However, the edible species that were present in over 50% each of these were: *Tilia tomentosa*, *Syringa vulgaris*, *Prunus cerasifera*, *Hibiscus syriacus,* and *Betula pendula* (Figure 9).

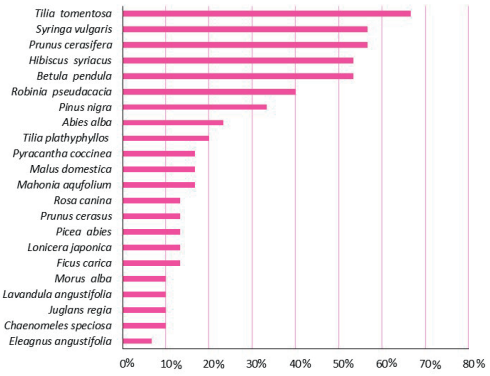

Figure 9. Frequency of edible species in the studied green areas

In each type of green areas, these species had a different number of individuals (Figure 10). In public parks, the dominant edible plants were *Tilia tomentosa*, *Prunus cerasifera,* and *Pinus nigra*; in private gardens – *Lavandula angustifolia*, *Syringa vulgaris,* and *Betula pendula*; on the streets – *Lavandula angustifolia*, *Tilia tomentosa,* and *Tilia platyphyllos*; in the green areas near blocks – *Tilia tomentosa*, *Tilia platyphyllos,* and *Lavandula angustifolia*.

Edible landscapes do not have an established percentage of edible plants to be called that. These landscapes combine ornamental characteristics of species with their usefulness as food, but not necessarily all of them have to be edible (Çelik, 2017; Rupprecht et al., 2023; Zheng & Chou, 2023; Ak & Güneş, 2023). In the absence of areas with edible herbaceous plants, in the studied green areas, the dominance of edible woody plants was considered. Based on this criterion, none of the studied public parks had enough edible plants to be an edible landscape (Figure 11). Instead, some of the streets and boulevards contain a large number of edible plants. Certainly, public administration (which created these public green areas) selected the species mainly based on their resistance to urban conditions, rather than on their food qualities. Anyway, without intentions, many of the street plantations studied are edible landscapes. This is explained by the large number of lindens used in street alignments compared with other species (Table 3). Also, dense plantations of shrubs, such as lavender (*Lavandula angustifolia*) and rose of Sharon (*Hibiscus syriacus*) contribute to this high percentage of edible plants on the streets.

Linden flowers are highly appreciated in Romania, being used for tea. *Tilia tomentosa* and *Tilia platyphyllos* are native species in Romania, with high resistance to pollution. *Tilia tomentosa has* also proven to be an effective remover of toxic particles from urban air (Petrova, 2024). Furthermore, some other edible species used in street plantations, such as *Betula pendula* or *Morus nigra,* were reported as significantly effective in removing pollutants (Daud et al., 2011; Urošević et al., 2019). For this reason, although the number of edible plants identified on some streets and boulevards was high in our study, they are not recommended for consumption because of the high pollution in the area. On the streets, tree crowns are generally inserted high up on the trunk (for traffic safety reasons) and it is difficult to reach the flowers or fruits (Figure 12), but in the case of shrubs, the risk of consumption persists because their edible parts are much easier to pick. Therefore, it is important to have more edible species in less polluted green areas, so as to reduce the temptation to consume parts of the plants on the street.

Some private gardens (38.8%) and green areas near blocks (51.8%) have more than half of the species as edible trees and shrubs. These small green areas appear as spotted edible landscapes, but may be considered in the future for development as larger areas of edible landscapes.

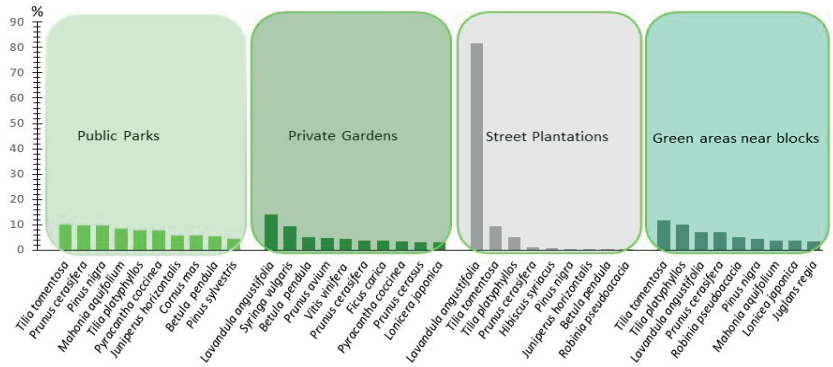

Figure 10. Dominant edible species as the number of individuals in each type of green area

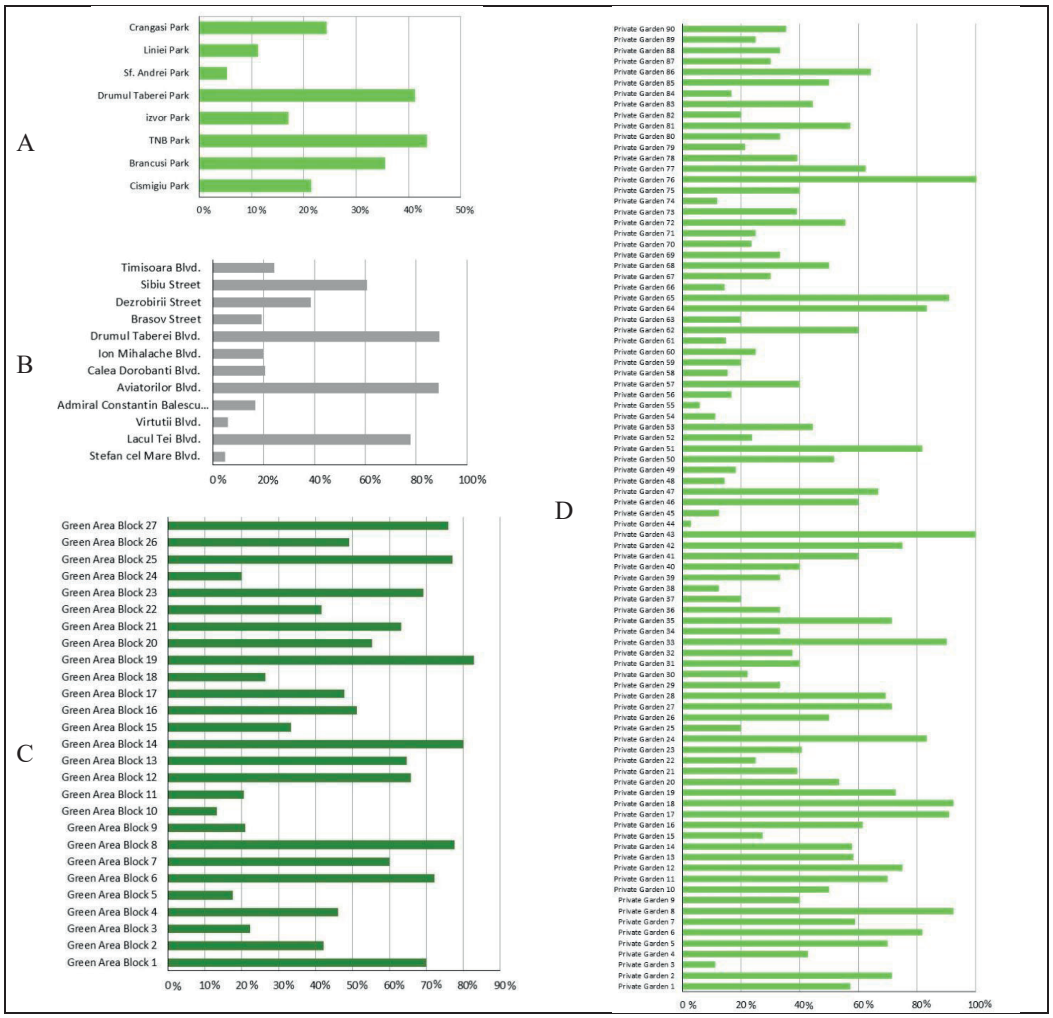

Figure 11. Share of edible plants: A. in public parks; B. on the streets; C. in the green area near residential buildings; D. in private gardens



Figure 12. Tree crowns level in a street plantation in District 6, Bucharest

It was observed a clear tendency of the urban population to cultivate edible species in their private gardens. In most of the private gardens studied, these species dominate. Moreover, the urban population living in apartment blocks has completed the existing plantations with edible species and, in some cases, these predominate. Most of the species were able to produce edible fruits/flowers in both climatic and soil conditions in Bucharest.



Figure 13. Fruits produced by plants grown near residential buildings. A. figs; B. pomegranate

Along the common fruit tree species (*Malus*, *Pyrus*, *Prunus, Juglans,* etc.), in recent years was noted a clear tendency of the population to plant near their homes new edible species for Romania, such as: *Ficus carica*, *Punica granatum*, *Actinidia chinensis* var. *deliciosa* or *Aronia melanocarpa*. Although winters have become milder in southern Romania, as a consequence of climate change, some of these species do not produce suitable fruits for consumption due to their small size or fail to ripen (Figure 13).

Nevertheless, in Bucharest, the urban population seems to appreciate species diversity and be interested in new plants, even if they cannot enjoy their fruits. Researchers in other countries have observed that the urban population cultivates edible plants not only for food reasons, but also for the leisure activities they can provide (Sartison & Artmann, 2020; Janowska et al., 2022; Zheng & Chou, 2023).

CONCLUSIONS

Edible landscaping offers advantages that conventional landscaping cannot. It is closer to the principles of nature, providing food and facilitating relationships among various life forms, including humans. Urban conditions can be restrictive for many plant species, and their selection must consider not only their resilience, but also the functions they provide. However, in some green areas we studied, edible woody plants were dominant.

Diversity of edible species was higher in private gardens and green areas near residential buildings, as evidenced by urban population interest in these species.

Most species produced satisfactory quantities of flowers/fruits in the climate and soil conditions of Bucharest. Even without forming suitable edible parts, as observed in species such as *Ficus carica*, *Punica granatum,* or *Actinidia chinensis* var. *deliciosa*, people continue to cultivate new edible plants for interest and amusement. Also, it was also remarked that none of the studied public parks in Bucharest can be considered edible landscapes, due to the dominance of ornamental plants without food qualities. To avoid the consumption of leaves/flowers/fruits from street plants, where many edible plants can sometimes be found, landscape architects should design edible landscapes in less polluted areas of cities in the future.

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