Scientific Papers. Series B, Horticulture. Vol. LXX, No. 1, 2026
Print ISSN 2285-5653, CD-ROM ISSN 2285-5661, Online ISSN 2286-1580, ISSN-L 2285-5653

# LANDSCAPING WITH UNDERUSED TREE SPECIES, A PLANT-BASED SOLUTION FOR GREENER CITIES

**Cristina ZLATI, Roxana PAȘCU, Roberto BERNARDIS, Roxana-Angela TUCALIUC, Ioana BUȚERCHI**

"Ion Ionescu de la Brad" Iasi University of Life Sciences,
3 Mihail Sadoveanu Alley, 700490, Iasi, Romania

Corresponding author email: roxana.pascu@iuls.ro

***Abstract***

*Present paper, "Landscaping with underused tree species, a plant-based solution for greener cities", highlights the essential role of urban plant cultivation as a multifunctional strategy to address the major challenges of the 21st century. In the current context of rapid urban population growth, climate change, food crises, market inflation, and the degradation of the quality of urban life, the use of horticultural species is promoted as a Nature-Based Solution, offering multiple benefits in priority areas such as Food Security, Sustainability, and the Environment, with Socio-Economic Benefits. Because Urban Horticulture includes a wide range of activities, from small home gardens and community gardens to rooftop gardens, vertical farms, and park management, the use of a variety of horticultural species (fruits, vegetables, herbs, ornamentals, and medicinal plants) is presented not only as a food production activity, but as an integrated sustainable development strategy that improves the resilience of cities to climate change and increases the quality of life of citizens through the development of green spaces. The focus of this paper will be on using underused tree species for landscape design and as a main source of biodiversity and sustainability.*

***Key words****: urban; horticulture; plant-based; sustainability; education.*

## INTRODUCTION

Tree species as part of an urban horticulture strategy represent a form of nature-based solution (NbS) that combines sustainability, participation, and self-sufficiency for improving communities and building greener and healthier cities. The practice of growing fruit and vegetable species within the city's green spaces has been common in Italy for a long time (Petti B. et al., 2024; Dessì V. et al., 2025), but in other areas, it is an innovative practice. On roofs (Zlati C., et al., 2022; Orsini F. et al., 2014), balconies and facades (Cojocariu M. et al., 2022) abandoned areas, or public spaces (Negrea et al., 2010; 2011), urban horticulture reduces dependence on industrial supply chains and the carbon footprint (Armar-Klemesu M., 2020), while also promoting healthier habits, as one choice drove to another (diet, sports). Pollution is a common problem in urban spaces or post-industrial lands, but the situation can be improved by using compost and other common practices in gardens (Pascu R. et al., 2019; 2022). Shared lots or gardens strengthen social bonds (Ang T.W.B. et al., 2025), promote environmental education (Girardet H., 2005), and encourage healthy lifestyles (Zlati C. et al., 2021; Song S. et al., 2022). Nevertheless, these practices are known for improving soil quality, reducing pollution (Pascu R. et al., 2021), and, very importantly, transforming neglected areas into productive and welcoming spaces. Thus, urban horticulture, through all known practices (Popa L.D. et al., 2024; Ciurlă L. et al., 2025; Sonea, 2025), proves to be a multifunctional solution, involved in regenerating the urban network, strengthening community relations and resilience.

Plant-based solutions (PbS) as part of NbS are capable of effectively addressing various challenges that may appear within the cities. Heat islands effect and high temperatures are mitigated by trees and green roofs (Zlati et al., 2022), air pollution is reduced due to vegetation that absorbs $CO_2$ and fine particles; the intensity of weather events is diminished and soil erosion is managed (Gupta K. et al., 2025).

At the same time, landscaping with tree species promotes the well-being of the population, firstly

because of the impact of green areas and community gardens.
These (PbS) approaches not only give us a nice aesthetic, beautiful landscapes, and delightful natural settings, but also promote the connection between people and the environment, contributing to community well-being and environmental sustainability (Kooijman E.D. et al., 2021).
Transforming a sterile place made of concrete into a living park with high vegetation, permeable soil, and small urban gardens makes heat more manageable, offering shade and shelter, promoting biodiversity, and creating an inclusive social space, place to different community events, all in one step (Bernardis R. et al., 2018).
It is known that PbS have the power to solve more problems simultaneously, being considered a valuable strategy for investing in healthier and more livable, greener cities (Gradinariu et al., 2007; Popek R., et al., 2024; Bernardis R. et al., 2024; Istrate M. et al., 2025).

## MATERIALS AND METHODS

***SWOT analysis*** was used as a planning tool and it focuses on the main Strengths, Weaknesses, Opportunities, and Threads of the opportunity of using tree species. It was used as a planning tool to ascertain the opportunity and feasibility of each project proposal.

***Case studies* (CSs)**

*Green School* (CS1) - First case study is located in Valea Lupului commune, Privighetoarea Street, Valea Lupului Village, Iași County (Figure 1).
It is a school that embraces the Green School concept with specific elements that integrates 3 components: the courtyard, green facade, and green roof. For this study, we took into consideration the fruit tree species that are used as focal points or groups.
*Urban Oasis* (CS2) – The park located in Iași County, 70 Alexandru cel Bun Boulevard (Figure 2). The aim of this project is to restore a degraded neighbourhood park, transformig it into a sustainable urban playground. The central idea is the involvement of the local community in co-design and the use of edible plantings.




Figure 1. CS1 - Green School
Location: Privighetoarea Street, Valea Lupului village, Iași County (https://earth.google.com/web)



Figure 2. CS2 - Urban Oasis
Location: Iași County, 70 Alexandru cel Bun Blvd (https://earth.google.com/web)

Table 1. Case study comparison

| Feature | CS1 Green School | CS2 Urban Oasis |
|---|---|---|
| Location Context | Rural/Suburban (Valea Lupului) | Dense Urban (Alexandru cel Bun Blvd) |
| Green Components | Courtyard Edible garden | Park, playground, edible garden |
| Primary User | Students Educators | Local community Residents |
| Method of Creation | Institutional design | Co-design (community involvement |
| Ecological Focus | Micro-climate | Biodiversity Urban revitalization |
| Role of Edibles | Visual Educational Focal points | Participatory Social "Food Commons" |
| Methodological analysis | Expert-Led mode | Participatory/Co-design |

The Green School demonstrates how to integrate nature into compact architecture for educational growth, while the Urban Oasis demonstrates how to integrate nature into dense urban fabric to foster social recovery.
Table 1 allows for a side-by-side evaluation of the two Iași-based projects.

Table 2. Species suited for this type of landscape design

| Nr. crt. | Species name |
|---|---|
| 1. | *Amelanchier* x *lamarckii* |
| 2. | *Amelanchier alnifolia* |
| 3. | *Aronia melanicarpa* |
| 4. | *Asimina triloba* |
| 5. | *Castanea sativa* |
| 6. | *Cornus mas* |
| 7. | *Cornus sanguinea* |
| 8. | *Corylus avellana* 'Contorta' |
| 9. | *Juglans nigra* |
| 10. | *Lonicera kamtschatika* var. *aedulis* |
| 11. | *Malus floribunda* |
| 12. | *Mespilus germanica* |
| 13. | *Pyrus salicifolia* |
| 14. | *Pyrus calleryana* |
| 15. | *Prunus cerasifera* 'Nigra' |
| 16. | *Prunus serrulata* |
| 17. | *Rosa centifolia* |
| 18. | *Sambucus nigra* |
| 19. | *Sorbus aucuparia* var. *aedulis* |
| 20. | *Ziziphus jujuba* |

Another objective of the present research is raising public awareness through strategic partnerships and training new generations of professionals prepared to build a greener future, which is considered of great value despite the economic, climatic, and all other risks.

***Design tools***
Images presented in the Results section are part of two projects that were designed using Lumion and SketchUp software. Both projects are in the implementation phase.
***Planting material***
The suitable variety of species (Table 2) offers décor throughout the seasons by flowering plants that bring colour and fragrance, bark, leaves, or fruits that persist on branches even in winter (Negrea R. et al., 2011a; Bernardis R. et al., 2022). This wide range contributes to a lively, fresh, and happy atmosphere.
Some of these species have already been used in the two case studies. Other species are recommended for PbS and could be replicated in other locations.
Main criteria for choosing species:
- high aesthetic value (persistent fruits on branches even in the cold season);
- a source of food for local fauna (birds);
- adaptability and resistance.

## RESULTS AND DISCUSSIONS

The results we present involve two existing cases and a couple of PbS for various landscape design using underutilized tree species. Adopting PbS in urban landscapes is a necessary requirement in the context of climate change. To effectively adopt these solutions, important changes in urban planning are absolutely necessary.
In order to ensure that this PbS provides sustainable benefits to the community, we conducted a SWOT analysis.
Table 3 details the SWOT analysis that is proposed to be conducted before the preparation of each project.

Table 3. SWOT Analysis

| Strengths | Weaknesses |
|---|---|
| - Nature-based solutions<br>- New vision and educational alignment<br>- Environmental impact and improved aesthetics<br>- Community Involvement | - Locals resistance to change<br>- Constant maintenance (watering, weeding, pruning)<br>- Need for specialized information |
| **Opportunities** | **Threats** |
| - Raising public awareness<br>- Training new generations of professionals<br>- Strategic partnerships: (collaboration with different NGOs)<br>- Promotion and image | - Competition for resources<br>- Climate change (drought, flooding, or extreme temperatures) risks<br>- Economic fluctuations<br>- Urban regulations (possible legal conditions) |

The main points of strength identified in the study were the new vision and educational alignment with the current social context, community involvement, strong environmental impact, and improved aesthetics.
Despite the high initial costs, constant maintenance, and resistance to change of the population, considered as potential weaknesses, the analysed opportunities pointed out the project feasibility, tipping the balance upwards.

The proposed theme can also be seen as a tool for enhancing urban resilience. Modern cities are presently perceived as "monocultures", dominated by a couple of species: *Tillia*, *Platanus*, or *Acer*, and this makes urban environments very vulnerable to pests and climate shifts. And, let's not forget that diversity is the best insurance policy against climate change.

Underused trees provide unique ecological niches that common ornamental trees might not. Introducing diversity in flowering periods could mean a wider range of birds and insects, providing pollination (Căpraru F. et al., 2009; Zlati C. et al., 2021).

PbS needs to be integrated into building regulations and urban planning, ensuring collaboration among public entities and the private sector, involving communities, and accessing adequate funding. Also, PbS requires an interdisciplinary approach;only with an integrated and long-term plan can cities truly benefit from all advantage, building a more sustainable, resilient, and safe tomorrow.

***Green School***. The interior courtyard within the school is an extension of the nature-oriented educational concept, providing a protected, quiet and stimulating space for student activities. Landscaping it has a vital importance. Green spaces have a important role of supporting the direct connection with the natural environment, providing a place for relaxation, reflection, and socialization, while also encouraging outdoor learning. Through its integration into the school circuit, the inner courtyard contributes to creating a pleasant microclimate, reducing stress, and promoting children's physical and emotional well-being. The presence of vegetation in learning environments has already a demonstrated impact on students' well-being and, mostly, on performance.

Numerous research highlights the fact that green spaces help reduce stress levels (Negrea R. et al., 2011; Armar-Klemesu M., 2020; Kooijman E.D. et al., 2021; Bușterchi I. et al., 2025), support concentration, and promote the development of emotional intelligence. It is known that children who carry out their activities in a natural setting are calmer, more receptive, and show greater involvement in the educational process. Direct interaction with plants stimulates curiosity, supports exploratory learning, and contributes to the formation of a positive, lasting bond with the environment. In this context, the Green School in Valea Lupului is not only a sustainable building, but also a living educational space, where nature becomes an active partner in the training of children (Figure 3).



Figure 3. Green School project – fruit tree species (*Malus floribunda*) used as a focal point (Authors)

***Urban Oasis.*** Vegetation in urban parks, playgrounds, and tree-lined avenues significantly lowers temperature through shading and evapotranspiration, effectively counteracting heat islands (Figure 4).

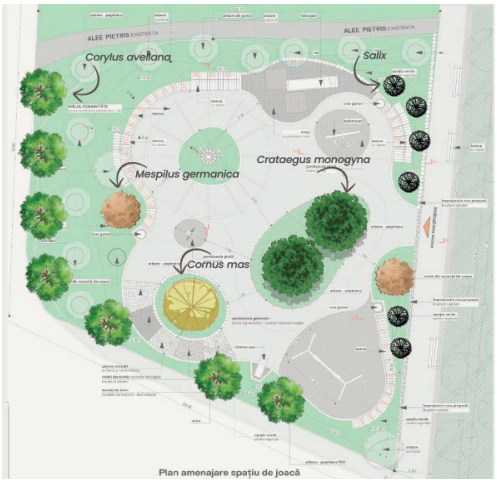


Figure 4. Urban Oasis - the playground layout plan (Authors)

Depending on the structure and composition of the vegetation, they can also play an important role in containing urban pollution. Green areas also provide crucial habitats for pollinating insects and other animals, contributing to urban biodiversity. For citizens, parks and gardens offer the opportunity to engage in outdoor physical activities, socialize, and relax, thus contributing to mental and physical well-being. Scientific studies (Vladimir I. et al., 2024 and 2025) show that the presence of green areas is correlated with lower stress levels, a lower incidence of disease, and better overall health. Building urban oases in cities is therefore important for both the environment and the well-being of the population.

The idea of an urban oasis can also be replicated in other neighborhoods. In the example from Figure 5 we exemplify a PbS for another Urban Oasis.

This example includes *Prunus serrulata*, *Sorbus aucuparia* var. *aedulis*, *Rosa centifolia*, *Pyrus salicifolia*, *Juglans nigra,* and *Castanea sativa.*

Figure 6 is a PbS example for smaller spaces: groups in private gardens or public institutions.

Based on the SWOT analyses, a comparative evaluation between the two case studies was made, as it can be seen in Table 4.

Table 4. Comparative evaluation between the case studies

| Feature | CS1 Green School | CS2 Urban Oasis |
|---|---|---|
| **Site context and typology** | A semi-private, institutional space. The design is inward-facing, focusing on the well-being and development of students. | A public, urban commons. This is a "restorative" project located in a high-density neighborhood. Its logic is outward-facing, intended to pull the community into a shared physical space. |
| **Vegetation strategy** | Fruit trees as focal points, used for aesthetic structure and botanical observation. | Edible plantings, used for community foraging and "urban farming" concepts. |
| **Architectural integration** | Three-dimensional<br>Integrates the built elements. | Horizontal/Landscape<br>Focuses on ground-level park restoration and pathways |
| **Social mechanism** | Curricular<br>Greenery is a tool for formal education and ecological awareness. | Participatory<br>Uses co-design to ensure the neighborhood feels ownership. |
| **Primary challenge** | Maintenance within a school budget and student safety. | Reversing degradation and preventing vandalism in a public park. |
| **Synthesis of Findings** | Acts as a controlled ecological laboratory. It proves how school infrastructure can mitigate its own environmental footprint while providing a "living" focal point for children. | Acts as a social-ecological catalyst. It proves how "edible" urban design can reclaim neglected public spaces and turn them into functional playgrounds |



Figure 5. A PbS for a Urban Oasis replica: includes *Prunus serrulata*, *Sorbus aucuparia* var. *aedulis*, *Rosa centifolia*, *Pyrus salicifolia*, *Juglans nigra,* and *Castanea sativa* (Photo Ina Asiminei)




Figure 6. PbS for groups and private gardens (Photo Ina Asiminei)

The use of fruit-growing species can be attractive, especially in rural and peri-urban areas, from the perspective of their availability and improving the natural resources quality (biodiversity, water, soil, landscape). Another advantage is that these species have melliferous potential, which is vital for biodiversity (Negrea R. et al., 2011b; Zlati C. et al., 2024).

In conclusion, if the Green School is about education through learning from nature, the Urban Oasis is about inclusion, living within nature. The use of fruit trees in both cases serves as the bridge between the two, transitioning Iași's landscape from purely decorative to actively productive.

## CONCLUSIONS

Concluding our study on Landscaping with Underused Tree Species requires a synthesis of environmental resilience, urban aesthetics, and the urgent need for biodiversity. Integrating fruit species into landscape design is promoted as a closer connection with nature, creating a friendlier and more harmonious space for the entire community and, at the same time, new sources of food, while ensuring biodiversity.

By approaching PbS design methods that integrate multiple factors, it is expected to create such spaces that combine aesthetics and utility, comfort, sustainability, and the durability of the whole community. Thus, the result will be improving the experience of residents and capitalizing on urban landscapes.

The reintroduction of underused tree species in urban landscape design is not only a botanical preference but a functional necessity. Building truly sustainable greener cities, we have to broaden the perspective on using a “safe” list of 5–10 species frequently selected and embrace a more diverse urban arboretum, including underutilized tree species. This approach reduces long-term maintenance costs, but more importantly, improves inhabitant well-being and also ensures that of our cities "green lungs" don't suffer when the climate changes.

Many of these species have unique canopy structures that could offer better shade density or wind protection compared to overused, thin-

canopied varieties. This could be considered a controlling microclimate strategy. Nevertheless, greener cities shouldn't just be green; they should also be visually engaging throughout the year. Species like *Amelanchier* x *lamarckii* of *Pyrus calleryana* offer spectacular autumn colors and bark textures that are often missing from the standard urban palette.

The transition to greener cities involves complex collaboration between urban planners, local nurseries, ecologists, and landscape architects to ensure these resilient species are grown and specified in public tenders (Gregory P.J. et all, 2019).

## REFERENCES


Ang, T.W.B.; Fong, Y.M.; Tan, D.; An, H.; Chien, S.C.; Soh, C.B.; Clementi, M.; Dessi, V. (2025). Feasibility and community acceptance of modular urban farming in Singapore: Design, prototyping, and pilot testing. *J. Sustain*. Outreach 2025, 5, 13–23.

Armar-Klemesu, M. (2020). Urban agriculture and food security, nutrition and health. In Growing Cities, Growing Food, Urban Agriculture on the Policy Agenda; Bakker, N., Dubbeling, M., Guendel, S., Sabel Koschella, U., De Zeeuw, H., Eds.; *Food and Agriculture Development Centre*: Feldafing, Germany, 2000; pp. 99–118.

Buțerchi, I., Ciurlă, L., Enache, I.-M., Patraș, A.; Teliban, G.,-C., Irimia, L.-M. (2025). Valorisation of beetroot peel for the development of nutrient-enriched dehydrated apple snacks. *Foods* 2025, *14*, 2560. https://doi.org/10.3390/foods14152560

Bernardis, R., Dascalu M. (2018). Aspects regarding the ornamental value of some rose nurseries spontaneous in Iasi district conditions. *Scientific Papers. Series B, Horticulture,* Volume LXII, Print ISSN 2285-5653, 591-596. https://horticulturejournal.usamv.ro/pdf/2018/Art97.pdf

Bernardis, R., Dascalu, M.; Chelariu, L.; Zlati, C., Pascu, R., Posta, D. (2022). The analysis of some ornamental rose varieties grown in the green spaces from Iași. *Scientific Papers. Series B, Horticulture*, Vol. LXVI, Issue 1, 2022, Print ISSN 2285-5653, pp. 638-643, https://horticulturejournal.usamv.ro/pdf/2022/issue_1/Art93.pdf

Bernardis, R.R., Zlati, C., Posta, D. (2024). The influence of some growth regulators on the germinability and development of *Albizia julibrissin* Durazz. *Scientific Papers. Series B, Horticulture*, Vol. LXVIII, Issue 1, 2024, Print ISSN 2285-5653, pp. 567-574. https://horticulturejournal.usamv.ro/pdf/2024/issue_1/Art72.pdf

Căpraru, F. Zlati C. (2009). Observations regarding yield phenophases of some diseases genetic resistant apple cultivars under the conditions of the Bistrita region, *U.S.A.M.V. Iași, Vol. I (52) Seria Horticultură*, pp. 539-544, ISSN 1454-7376. http://www.uaiasi.ro/revista_horti/files/Nr_2009/vol_52_2009%20(98).pdf

Ciurlă, L., Enache, I.-M., Buțerchi, I., Mihalache, G., Lipșa, F.D.; Patraș, A. (2025). A New Approach to Recover Bioactive Compounds from Apple Pomace: Healthy Jelly Candies. *Foods* 2025, *14*, 39. https://doi.org/10.3390/foods14010039

Cojocariu, M., Chelariu, E.L., Chiruță, C., Pascu, R., Avarvarei, B.V. (2022). Comparative study on the behavior of *Plectranthus forsteri* and *Coleus blumei* species growing on the ground and vertical systems for garden facades in the climate of North-East Romania. *Scientific Papers. Series B. Horticulture*, Vol. LXVI, Issue 1, 2022, Print ISSN 2285-5653, pp. *657-666,* https://horticulturejournal.usamv.ro/pdf/2022/issue_1/Art96.pdf

Dessì, V.; Lucchi, E.; Clementi, M.; Chien, S.-C.; Soh, C.B. (2025). Urban agriculture: Perceived potentials and critical issues in Italy and Singapore. *Sustainability* 2025, *17*, 10609. https://doi.org/10.3390/su172310609

Girardet, H. (2005). Urban agriculture and sustainable urban development. In CPULS: Continuous Productive Urban Landscapes-Designing Urban Agriculture for Sustainable Cities; Viljoen, A., *Ed.; Elsevier*: Amsterdam, the Netherlands, 2005; pp. 32–39.

Gradinariu, G., Istrate, M., Zlati, C., Corneanu, G., Petre, L. and Gradinariu, F.S. (2007). The national germplasm collection and new sweet cherry hybrids in Iasi, Romania. *Acta Hortic*., 760, 439-445 DOI: 10.17660/ActaHortic.2007.760.60 https://doi.org/10.17660/ActaHortic.2007.760.60

Grădinariu, G.; Zlati, C., Istrate, M.; and Draghia, L. (2011). Improvement of grafting union in plum by studying graft anatomy. *Acta Hortic*., 923, 283-290 DOI: 10.17660/ActaHortic.2011.923.42 https://www.ishs.org/ishs-article/923_42

Gregory, P.J., Mayes, S., Hui, C.H. et al. (2019). Crops for the Future (CFF): An overview of research efforts in the adoption of underutilised species. *Planta* 250, 979–988 (2019). https://doi.org/10.1007/s00425-019-03179-2.

Gupta, K.; Seddighi, M.; Davies, E.L.; Thondre, P.S.; Samangooei, M. (2025). Drivers and barriers for edible streets: A case study in Oxford, UK. *Sustainability* 2025, 17, 6538.

Istrate, M., Zlati, C., Dascălu, M. (2025). Pomicultură. Aplicații practice, Editura "*Ion Ionescu de la Brad*" Iași, ISBN 978-973-147-586-8.

Kooijman, E.D., McQuaid, S., Rhodes, M.-L., Collier M.J., Pilla F. (2021). Innovating with nature: From nature-based solutions to nature-based enterprises. *Sustainability* 2021, *13*, 1263. https://doi.org/10.3390/su13031263

Negrea, R., Zlati, C. (2010). Flowers, fruits, and tree branches' chromatic effect, seen as a source of colour in the vegetal landscape, Scientific Papers of the R.I.F.G., Pitesti, Vol. XXVI, 2010, pp. 160-165, Print ISSN 1584-2231. http://publications.icdp.ro/publicatii/Lucrari%202010/086.pdf

Negrea, R., Zlati, C. (2011a). Tree foliage, as the the main source of colour in landscape composition, *U.S.A.M.V. Iași Scientific papers, Vol. I (54) Seria Horticultură*, pp. 531-536, ISSN 1454-7376. http://www.uaiasi.ro/revista_horti/files/Nr2_2011/Vol%2054-2_2011%20(91).pdf

Negrea, R., Zlati C., Dascalu D.M. (2011b). The importance of using fruit tree species with ornamental role in rustic gardens landscaping, *Lucrari Ştiintifice vol. 54, supliment, Seria Agronomie,* p. 60-64, Print ISSN 1454-7414. http://www.uaiasi.ro/revagrois/PDF/2011s/paper/pagini_54s_60-64_Negrea.pdf

Orsini, F.; Gasperi, D.; Marchetti, L.; Piovene, C.; Draghetti, S.; Ramazzotti, S.; Bazzocchi, G.; Gianquinto, G. (2014). Exploring the production capacity of rooftop gardens (RTGs) in urban agriculture: The potential impact on food and nutrition security, biodiversity and other ecosystem services in the city of Bologna. *Food Secur*. 2014, 6, 781–792.

Pascu, R., Zlati, C., Calance, A. (2019). Studies regarding the improvement of the urban environment in Piatra Neamț municipality by planning a public garden. *Scientific Papers. Series B. Horticulture*, Vol. LXIII, Issue 1, 2019, Print ISSN 2285-5653, pp. 499-506.https://horticulturejournal.usamv.ro/pdf/2019/issue_1/Art73.pdf

Paşcu, R., Zlati, C., Calance, Al., Bernardis, R., Dodu, D. (2021). Methods of rehabilitation of a degraded area in Orăştie, *Scientific Papers. Series B. Horticulture,* Vol. LXV, nr. 1, 2021, pp. 664-673 (684-693), ISSN: 2285-5653, eISSN: 2286-1580. https://horticulturejournal.usamv.ro/pdf/2021/issue_1/Art91.pdf

Paşcu, R., Zlati, Cr., Bernardis, R. (2022). Rehabilitation of the dendrological park in Buhusi, Bacau County, *Scientific Papers. Series B. Horticulture,* Vol. LXVI, no. 1, 2022, pp. 730-737, ISSN: 2285-5653, eISSN: 2286-1580, http://horticulturejournal.usamv.ro/pdf/2022/issue_1/Art106.pdf

Petti, B., Ottaviano, M. (2024). Identification of agricultural areas to restore through nature-based solutions (NbS). *Land* 2024, *13*, 1954. https://doi.org/10.3390/land13111954

Popa, L.D., Teliban, G.C.; Buțerchi, I., Burducea, M., Isticioaia, S.F., Nenciu, Fl., Leonte, A., Buburuz, A.A.; Pintilie, A.S.; Bodale, I., Cojocaru, A., Lobiuc, A., Stoleru, V. (2024). Physiological, biochemical and agroproductive characteristics of hemp microgreens in different growing environments. *Scientific Papers. Series A: Agronomy*, Vol. LXVII, No. 1, 2024, pp 886-895, ISSN 2285-5785; ISSN CD-ROM 2285-5793; ISSN Online 2285-5807; ISSN-L 2285-5785, https://www.agronomyjournal.usamv.ro/pdf/2024/issue_1/Art114.pdf

Popek, R., Roy, A., Mandal, M., Przybysz, A., Drążkiewicz, K., Romanowska, P., Sarkar, A. (2024). Enhancing urban sustainability: How spatial and height variability of roadside plants improves pollution capture for greener cities. *Sustainability* 2024, *16*, 11131. https://doi.org/10.3390/su162411131

Sonea, A.P. (2025). Fuzzy aspects associated with biological inheritance. *Mathematics* 2025, *13*, 3847. https://doi.org/10.3390/math13233847

Song, S.; Shan Lim, M.; Rex Richards, D.; Hugh Tiang, W.T. (2022). Utilization of the food provisioning service of urban community gardens: Current status, contributors, and their social acceptance in Singapore. *Sustain. Cities and Society* 2022, 76, 103368.

Vladimir, I., Cojocariu, M. (2024). The use of natural materials in the design of urban playgrounds: A sustainable approach important for the community. *Scientific Papers. Series B. Horticulture,* Vol. LXVIII, Issue 1, Print ISSN 2285-5653, 684-692. https://horticulturejournal.usamv.ro/pdf/2024/issue_1/Art87.pdf

Vladimir, I., Cojocariu, M. (2025). From neglect to vitality: Landscape design approaches for reconverting lost urban spaces. *Scientific Papers. Series B. Horticulture*, Vol. LXVIV, Issue 1, Print ISSN 2285-5653, 687-692. https://horticulturejournal.usamv.ro/pdf/2025/issue_1/Art84.pdf

Zlati, C., Paşcu, R. (2021). Urban farming: Opportunity for fruit growing development in Romania, *Scientific Papers. Series B. Horticulture*, Vol. 65, Issue 1, 2021, pp. 717-724, ISSN: 2285-5653, eISSN: 2286-1580. https://horticulturejournal.usamv.ro/pdf/2021/issue_1/Art95.pdf

Zlati, C., Pascu, R., Bernardis, R. (2022). Using fruit-growing species for green roofs. *Scientific Papers. Series B. Horticulture*, Vol. LXVI, Issue 1, 2022, Print ISSN 2285-5653, pp. 772-780. https://horticulturejournal.usamv.ro/pdf/2022/issue_1/Art112.pdf

Zlati, C., Istrate M., Pascu R., Bernardis R. (2024). An assessment of current status, future trends and opportunities for improving exotic and underutilized pome fruit species production in Romania, *Scientific Papers. Series B. Horticulture,* Vol. 68, Issue 2, 2024, pp. 224-229, ISSN-L: 2285-5653, eISSN: 2286-1580. https://horticulturejournal.usamv.ro/pdf/2024/issue_2/Art30.pdf

https://earth.google.com/web

Photos: Ina Asiminei


EX·TERRA·AVRVM

# MISCELLANEOUS


EX·TERRA·AVRVM