THE IMPACT OF MEADOW COMMUNITY MANAGEMENT ON SPECIES COMPOSITION IN URBAN AREAS

Marek Hus, Anna Pástorová
Institute of Landscape Architecture, Faculty of Horticulture and Landscape Engineering, Slovak University of Agriculture in Nitra, Tr. A. Hlinku 2, 94976 Nitra, Slovakia

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Abstract
Grass-herb communities in urbanized environments with diverse plant species contribute effectively to the aesthetics of urban landscapes, enhance environmental quality, support biodiversity growth, and create suitable conditions for urban pollinators. Their integration into green infrastructure systems represents a valuable strategy in addressing the climate crisis. This study focuses on meadow communities established as part of the revitalization of a city park in Nové Zámky. Three different seed mixtures were applied to five experimental plots within a research area of 2200 m². Meadow communities were observed over a three-year monitoring period, with particular attention given to the impact of management practices, including species composition, mowing frequency and timing, irrigation, and weed control. A significant finding was the persistence of certain herbaceous species in the monitored plots despite inadequate management practices and periods of drought. This highlights their ability to adapt and regenerate under adverse environmental conditions.

Key words: meadows, biodiversity, aesthetics, representation of species

Introduction

The climate crisis, biodiversity loss, and environmental degradation are driving the need for increased green spaces in cities (Sikorska et al., 2020; Van Vliet, 2019; Djoghlaf, Dodds, 2011; McDonald et al., 2008). Green infrastructure mitigates climate change, improves quality of life, including mental health, and supports biodiversity (Bihuňová, Halajová, Tóth, 2017; Hus, Paganová, Raček, 2021; Kuczman, Bechera, Rózová, Tóth, 2024; Mell et al., 2019; Southon et al., 2017; Van den Bosch, Ode Sang, 2017).

The decline in pollinator populations (Jordan, Unger, Khanna, 2023) threatens ecosystem services and agriculture. Promoting plant diversity attractive to pollinators and creating stable habitats, such as wildflower meadows, is one solution (Schmack, Egerer, 2023; Hudeková et al., 2018; Rózová, Pástorová, Kuczman, 2023).

Herbaceous and meadow communities are increasingly applied in urban areas such as parks, rooftop gardens, and public spaces (Feriancová and Tóth, 2013). These designs enhance ecological functions and visitor movement, while reducing erosion, dust, and urban overheating (Hillová, 2012; Rózová, Pástorová, 2022; Tóth, Pavelka, 2020).

Ecological approaches emphasize native species and perennials for seasonal appeal, minimal maintenance, and ecological functionality (Evertson, 2015; Hitchmough, 2017; Oudolf, Kingsbury, 2013). Flowering meadows, with at least 30 species, support pollinators, birds, and small mammals, contributing to urban biodiversity (Roguz et al., 2023). Meadows are typically mowed twice a year without fertilizers, promoting natural regeneration (Hudeková et al., 2018; Fieldhouse, 2004).

Flowering meadows are common in Europe, with their design and maintenance governed by national legislation and nature protection goals (Aronson et al., 2017). Successful establishment requires high-quality substrates, appropriate species selection, and long-term management, including regular mowing, weeding, and watering (Kuťková, Klasová, 2018; Hillová, 2012).

Background information

The research focused on evaluating the adaptation of species from commercial seed mixtures used in the direct seeding of newly established wildflower meadows in an urban environment. The analysis was conducted in Hliník Park, located in the town of Nové Zámky (Slovakia), where a total of 12 experimental plots were originally established. Five of these plots, sown with commercial seed mixtures (*Naturgarden*®, *Krasohled*®, *Karneval*®), were selected for detailed analysis (Fig. 1).

The plots were situated in the park along Holubyho and Hliníková Streets, within a densely built-up urban area. Seeding took place in December 2020 following prior site preparation, which included herbicide application, soil cultivation, and the application of a sand mulch layer. The seed mixtures were sown at a rate of 6–8 g/m² and subsequently incorporated into the soil using mechanical raking and rolling. No post-sowing irrigation or weed control measures were applied.

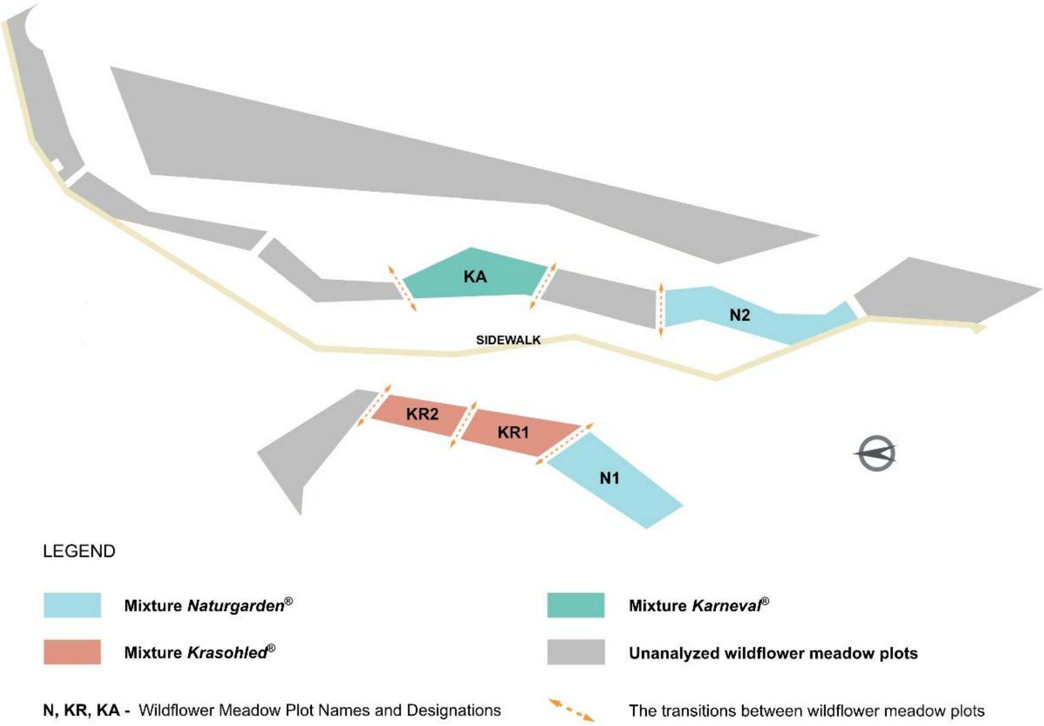

Fig. 1: Map of Analyzed Plots (Source: authors)

The seed mixtures included both annual and perennial species. The composition of the selected mixtures was designed to enhance adaptation to urban environmental conditions and to promote biodiversity.
Climatic and precipitation data were obtained from the Hurbanovo meteorological station (Slovak Hydrometeorological Institute – SHMÚ), located approximately 17 km from the research site. The study area is situated in a region characterized by a warm and dry climate, with an average annual temperature of 9.7°C and an average annual precipitation total of 556 mm (SHMÚ, 2025).

Materials and methods

Data collection was conducted over three consecutive growing seasons (2021–2023), with surveys carried out three times per year: in spring, summer, and autumn. On each experimental plot, where selected seed mixtures had been applied, four randomly selected quadrats measuring 2 × 2 meters were delineated. Within these quadrats, the presence of plant species was recorded and categorized into four functional groups: grasses, perennials, annuals, and legumes (Fig. 2). The classification was based on the seed grouping system used by the Czech seed supplier. The exact composition of the seed mixtures is available online at (Agrostisobchod, n.d.).

NUMBER OF PLANT SPECIES IN EACH MIXTURE CATEGORY			
Mixture plant categories	Wildflower meadow mixture		
	Naturgarden®	***Krasohled®***	***Karneval®***
Grasses	11	13	10
Perennials	22	38	42
Annuals	2	27	33
Legumes	6	7	3
TOTAL	**41**	**85**	**88**

Fig. 2: Number of plant species in each category of the mixtures (Source: authors)

Species presence was recorded using a **nominal scale**. A species was marked as **1** (present) if it occurred in at least three out of four research square; otherwise, it was marked as **0** (absent).
We focused on individual species that occurred consistently across the experimental plots throughout the three-year monitoring period. At the same time, we assessed the influence of the maintenance regime and climatic conditions (precipitation and temperature) on the overall condition and quality of the vegetation cover.

Analysis of Wildflower Meadow Management and the Impact on Species Composition in Urban Areas

As part of the analysis of the development of wildflower we monitored the impact of maintenance on their condition over three growing seasons. The maintenance management was carried out by the municipal technical services, and we did not intervene in the maintenance plan. We focused on monitoring mowing, irrigation, and weeding practices (Fig. 3).

In the first year of observation, the mowing of plots **N1** and **N2** was carried out at the wrong time and with the incorrect cutting height. This intervention, combined with drought conditions, caused stagnation of the vegetation and a decline in species diversity. On these plots, the presence of species from the seed mixture began to decrease, and the vegetation failed to regenerate adequately.

In the following years, the negative impact continued with a decline in species from the mixture, and by the end of the third season, the species were no longer identifiable on plots **N1** and **N2**. On plots **KR1** and **KR2**, mowed at the end of October, species diversity decreased due to improper mowing timing (late May to early June), which hindered summer and fall bloomers, worsened by lack of irrigation and weeding. Plot **KA** with the Karneval® mixture developed best despite late mowing in November. Annuals thrived in the first year, and although later mowing increased invasive species in subsequent years, the plot remained overall. Absence of precipitation in 2021 and 2022 exacerbated poor plant growth due to insufficient irrigation during dry periods.

Results and Discussion

We identified the species with the highest resilience and adaptability within each plant category, which successfully established themselves on the monitored plots during the three-year study period. The result of this analysis is a list of species that were present throughout all vegetative seasons as well as over the entire three-year monitoring period. These species reflect the ability to adapt to diverse habitat and management conditions, including periods of drought and less optimal maintenance regimes.

LIST OF MOST RESILIENT SPECIES FROM MIXTURES (Long-term presence on monitored plots): Perennials (*Achillea millefolium* L., *Anthemis tinctoria* L., *Plantago lanceolata* L., *Salvia pratensis* L., *Leucanthemum vulgare* (Vaill.) Lam., *Knautia arvensis* L., *Matricaria chamomilla* L., *Salvia horminum* L., *Daucus carota* L., *Berteroa incana* L., *Centaurea jacea* L., *Verbascum densiflorum* L., *Phacelia tanacetifolia* L., *Salvia verticillata* L.; **Grasses** (*Festuca pratensis* L., *Festuca rubra rubra* L., *Festuca rubra trichophylla* L., *Festuca trachyphylla* L., *Agrostis capillaris*); **Annuals** (*Salvia horminumv* L., *Scabiosa atropurpurea* L., *Chrysanthemum carinatum* 'Polárka', *Nigella damascena* 'Persian Jew.', *Gypsophila elegans* 'Covent Garden'); **Legumes** (*Lotus corniculatus* L., *Trifolium incarnatum* L., *Astragalus cicer* L., *Medicago lupulina* L.)

The following list of species we identified as resistant includes: *Achillea millefolium* L., *Agrostis capillaris* L., *Plantago lanceolata* L., *Leucanthemum vulgare* (Vaill.) Lam., *Daucus carota* L., *Festuca rubra* L., *Lotus corniculatus* L., *Medicago lupulina* L. This aligns with the recommendation of Jarvis (2014), who compiled a mixture suitable for use in areas with various soil types in urban parks (Fig. 3). Authors such as Dunnett, Hitchmough, Kuťková, Straková, and many others also highlight the potential of these species in wildflower meadow seed mixes.

Our findings are consistent with the recommendations of Lengyel (2017), Feunteun (2014), and Kuťková (2013), who emphasize the importance of proper maintenance management in establishing and sustaining wildflower meadows. Irrigation during the early stages of establishment, particularly during germination and in dry spring periods, is crucial for seedling development and stand formation. According to Greenlee (2009), an optimal weekly precipitation level of 25 - 30 mm is recommended. Regular watering also contributes to reducing weed pressure and promotes vegetation density (Davies et al., 2012; Hitchmough, 2017).

Timely weed removal within 3 to 4 weeks after sowing, as recommended by Williams & Kiehl (2012), Johnson et al. (2018), and Kuťková (2013), further supports successful establishment. In terms of mowing, proper timing and method - cutting at a height of at least 25 cm using a bar mower-are essential for minimizing damage and promoting long-term meadow development (Pywell et al., 2003; Feunteun, 2014; Fieldhouse, et al., 2004).

Conclusion

The analysis indicates that appropriate management is essential for maintaining biodiversity and supporting the development of wildflower meadows in urban environments. Strict adherence to mowing schedules, irrigation during dry periods, and regular weeding are critical to achieving the desired outcomes and preserving the diversity of plant communities. Equally important is the selection of species with high adaptive potential and resistance to adverse urban conditions, which enhances the stability and long-term sustainability of vegetation elements within the urban landscape.

		CALENDAR MONTHS OF THE YEAR 2021-2023												
		JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	
Average monthly air temperatures		1,9 [°C]	2,2 [°C]	5,6 [°C]	9 [°C]	14,2 [°C]	23,1 [°C]	24,1 [°C]	20,4 [°C]	16,7 [°C]	10 [°C]	5,3 [°C]	1,8 [°C]	2021
Average monthly atmosp. Precipitation		31,4 mm	37,9 mm	2,4 mm	42 mm	93,4 mm	6 mm	46,4 mm	32 mm	56,5 mm	18,8 mm	31,9 mm	47 mm	
Management of Meadow Maintenance on Research Plots														TOTAL
PLOT **N1**	**M**	0 x	0 x	0 x	0 x	0 x	**1 x**	**1 x**	**1 x**	**1 x**	0 x	0 x	0 x	**4 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **N2**	**M**	0 x	0 x	0 x	0 x	**1 x**	**1 x**	**1 x**	**1 x**	**1 x**	**1 x**	0 x	0 x	**6 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KR1**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KR2**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KA**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
Average monthly air temperatures		1,9 [°C]	4,9 [°C]	5 [°C]	10 [°C]	18,2 [°C]	22,6 [°C]	23,3 [°C]	23,4 [°C]	15,7 [°C]	12,7 [°C]	6,5 [°C]	2,6 [°C]	2022
Average monthly atmosp. Precipitation		8,2 mm	23,8 mm	22,4 mm	22,3 mm	32 mm	78,7 mm	29,5 mm	55,2 mm	104,2 mm	4,4 mm	19,7 mm	68,8 mm	
PLOT **N1**	**M**	0 x	0 x	0 x	**1 x**	0 x	**1 x**	**1 x**	0 x	0 x	**1 x**	0 x	0 x	**4 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **N2**	**M**	0 x	0 x	0 x	**1 x**	0 x	**1 x**	0 x	0 x	0 x	**1 x**	0 x	0 x	**3 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KR1**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KR2**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KA**	**M**	0 x	0 x	0 x	**1 x**	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**2 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
Average monthly air temperatures		4 [°C]	3,4 [°C]	7,8 [°C]	9,7 [°C]	16,2 [°C]	20,7 [°C]	23,6 [°C]	22 [°C]	19,7 [°C]	14 [°C]	6,5 [°C]	3 [°C]	2023
Average monthly atmosp. Precipitation		97,4 mm	21,9 mm	16,4 mm	40,8 mm	94,4 mm	57 mm	82,8 mm	89 mm	41,2 mm	81,6 mm	82,9 mm	104,5 mm	
PLOT **N1**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **N2**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KR1**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KR2**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
PLOT **KA**	**M**	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	**1 x**	0 x	0 x	**1 x**
	W	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x
	I	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x	0 x

Fig.: 3 Management of Meadow Maintenance on Research Plots (Source: authors)

References

Aronson, M. F., Lepczyk, C. A., Evans, K. L., Goddard, M. A., Lerman, S. B., MacIvor, J. S., ... & Vargo, T. (2017). Biodiversity in the city: key challenges for urban green space management. Frontiers in Ecology and the Environment, 15(4), 189-196.

Bihuňová, M., Halajová, D., & Tóth, A. (2017). Revitalization and recreational proposal of the Váh riverbank. In Public recreation and landscape protection – With nature hand in hand, pp. 311–316.

Davies, Z. G., Edmondson, J. L., Heinemeyer, A., Leake, J. R., & Gaston, K. J. (2012). Mapping an urban ecosystem service: quantifying above-ground carbon storage at a city-wide scale. Journal of Applied Ecology, 49(5), 1110-1118.

Evertson, Green Infrastructure Coordinator why we love praire, Nebraska Statewide Arboretum Sustainable Landscapes for Healthy Homes & Communities, 2015. [online].
Feriancová, Ľ., & Tóth, A. (2013). KRAJINA V OBCI–OBEC V KRAJINE. Heinrichová, M. Reháčková, T.(eds.): Aktuálne problémy krajinnej architektúry a krajinného plánovania. Bratislava: FA, STU, 25-32.
Feunteun, M. (2014). Biologishe Vielfalt im Herzen Ihrer Landschaftsgestaltung. In Tagungsband: Thüringen Garten-und Landschaftsbautag, 29.01.2014, pp. 36-34.
Fieldhouse, Ken a James Hitchmough (eds.). Plant user handbook: a guide to effective specifying. Oxford: Blackwell Pub., 2004. ISBN 0-632-05843-9.
Greenlee, J. (2009). The American Meadow Garden: Creating a Natural Alternative to the Traditional Lawn. Timber Press. ISBN 13: 9780881928716.
Hillová, D. 2012. Tvorba v sadovníckom kvetinárstve. Nitra: Slovenská poľnohospodárska univerzita, 2012. 86 s. ISBN 978-80-552-0885-5
Hillová, D., Kuťková, T.: Contemporary Approaches to Designing Flower Beds in Urban Environments. Životnéprostredie, 2018, 52, 1, p. 54 – 61. ISSN 0044-4863.
Hitchmough, J., 2017. Sowing beauty: designing flowering meadows from seed. Timber Press.
Hudeková, Z. I., Peterková, V., Iľko, I., & Gallayová, Z. (2018). Príroda v meste: nový pohľad na tvorbu a údržbu zelene a záhrad: príručka nielen pre samosprávy. Bratislava: Živica. ISBN 9788097296216
Hus, M., Paganová, V. and Raček, M. (2021). Non-traditional alley tree species for urban conditions. Acta Hortic. 1331, 151-158, DOI: 10.17660/ActaHortic.2021.1331.21
Jarvis, D. 2014. WILDFLOWER MEADOW Creation and management in land regeneration. In Forest Research [online]. https://www.forestresearch.gov.uk/documents/2446/BPG_15.pdf
Johnson, A. L., Borowy, D., & Swan, C. M. (2018). Land use history and seed dispersal drive divergent plant community assembly patterns in urban vacant lots. Journal of Applied Ecology, 55(1), 451-460.
Jordan, A., Unger, M., & Khanna, V. (2023). The Significance of Insect Pollinators: Opportunities and Challenges. Engineering and Ecosystems: Seeking Synergies Toward a Nature-Positive World, 107-134.
Kuczman, G.; Bechera, D.; Rózová, Z.; Tóth, A. (2024). Roadside Vegetation Functions, Woody Plant Values, and Ecosystem Services in Rural Streetscapes: A Qualitative Study on Rural Settlements in Western Slovakia. Land 2024, 13, 272. https://doi.org/10.3390/land13030272
Kuťková T, Klasová K, Dubský M, Barošová I. Effect of sowing substrate on coverage and rate of weeding of directly sown annual flower beds. Hort. Sci. (Prague). 2018;45(3):156-163. doi: 10.17221/161/2016-HORTSCI.
Lengyel, S., Mester, B., Szabolcs, M., Szepesváry, C., Szabó, G., Polyák, L., ... & Aradi, C. (2020). Restoration for variability: Emergence of the habitat diversity paradigm in terrestrial ecosystem restoration. Restoration Ecology, 28(5), 1087-1099.
Oudolf and Kingsbury, 2013 P. Oudolf, N. Kingsbury (Eds.), Planting: A new perspective, Timber Press, London (2013)
Pywell, R.F., Bullock, J.M., Hopkins, A., Walker, K.J. & Sparks T.H. (2002). Improving the management of grasslands for flower-visiting insects. J. Appl. Ecol., 39(2), 321–337. DOI: 10.1046/j.1365-2664.2002.00706.x.
Roguz, K., Chiliński, M., Roguz, A., Zych, M. (2023). Pollination of urban meadows – Plant reproductive success and urban-related factors influencing frequency of pollinators visits. Urban Forestry & Urban Greening, 84, 127944. ISSN 1618-8667. doi: 10.1016/j.ufug.2023.127944.
Rózová, Z., Pástorová, A. and Kuczman, G., 2023. Development of flower meadows in an urbanized environment. Ekológia (Bratislava), 42(3), pp.218-229.
Straková, M., Straka, J., Janál, J. and Křesadlová, L., (2015). Trávníky a květnaté louky v památkách zahradního umění. Národní památkový ústav ve spolupráci s Metodickým centrem zahradní kultury v Kroměříži.
Tóth A., Pavelka T. (2020). "Park Hliník Nové Zámky: Revitalizácia mestského parku na Hliníkovej a Holubyho ulici." Archinfo.sk, https://www.archinfo.sk/diela/park-hlinik-nove-zamky.html.

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Souhrn
Z analýzy vyplývá, že správná péče je klíčová pro udržení biodiverzity a vývoje květinových luk v městském prostředí. Důsledné dodržování termínů kosení, zavlažování v suchých obdobích a pravidelné odplevelování jsou nevyhnutelné pro dosažení požadovaného výsledků a zachování

pestrosti rostlinných společenství. Stejně důležitý je i vhodný výběr druhů s vysokým adaptačním potenciálem a odolností voči nepříznivým podmínkám urbanizovaného prostředí, což zvyšuje stabilitu a dlhodobou udržatelnost vegetačních prvků v městském prostředí.

Contact:
Ing. Marek Hus, PhD.
E-mail: marek.hus@uniag.sk