

# From Windowsills to Rooftops: The Cultural History and Modern Uses of Domestic Plant Cultivation in Estonia

**Mare Kõiva**

*Leading Research Fellow, Department of Folkloristics, Estonian Literary Museum, Tartu, Estonia*

*e-mail: mare@folklore.ee*

**Abstract:** This study examines the historical development, cultural meanings, and contemporary practices of indoor, balcony and rooftop gardening in Estonia. Combining historical sources, folkloric data, horticultural literature and qualitative interviews, the research highlights how urban plant cultivation reflects broader social, environmental, and aesthetic transformations across the 19<sup>th</sup>–21<sup>st</sup> centuries. The study demonstrates that urban gardening in Estonia is shaped by intertwined cultural, ecological, architectural and personal factors.

**Keywords:** urban gardening, indoor gardening, balcony gardening, Estonia, cultural practices, sustainability, green infrastructure, qualitative interviews

## 1. Introduction

Gardens on balconies and windowsills have a long history, dating back to the nineteenth century. For example, in Philadelphia, USA, in the 1870s, the production of so-called plant boxes that were installed on windows began. By the late nineteenth century, windowsill gardening was valued as a form of mass activism that brightened life, taught the use of useful plants and even made suburbs—rarely invested in—more attractive. From the United States, the

movement spread to Europe as one of the initiatives of the women's movement for urban reform. Sonja Dümpelmann (2025) emphasized that this way of using plants fostered connections between people and plants, between interior and exterior spaces, between domestic and public spheres and between urban centers and the periphery. According to her, these innovations were evident but also served to conceal larger social problems.

Housing construction and the development of new, well-connected urban districts (such as Annelinn in Tartu, Mustamäe and Lasnamäe in Tallinn (Nerman 1998, 2012) also played a role. The first wave of apartment buildings lacked balconies, partly due to insulation requirements, but in the 1970s–1980s and later, most larger apartments (three- to four-room units) included balconies. Most of these have been enclosed later by owners with plastic windows to save heat (although the glass panels can be slid aside and opened).

In Estonia, the development of gardens and horticulture has undergone significant transformation throughout the 20<sup>th</sup> century, shaped by socioeconomic factors, environmental concerns and shifts in land use. From philosophical point of view these developmental trajectories reveal adaptability, creative solutions, and a gradual yet notable change in attitudes, including the consolidation of ecological perspectives (Alavoine-Mornas; Girard 2017; Dümpelmann 2025, 2023; Gorris *et al.* 2025). Alongside historical sources, surveys of older Estonian food cultures (Moora 1980, 1991), and the numerous horticultural manuals published throughout the 20<sup>th</sup> century (Banner 2019; Viks 1985). At present, the analysis of vernacular plantcultivation practices remains somewhat preliminary, and a systematic examination of the available reports still lies ahead. Although it was initially planned to include folkloric accounts in the dataset, this idea had to be abandoned. For now, it can be noted that the existing folklore databases (containing material from the seventeenth century to the midtwentieth century) merit closer scrutiny. These sources reveal, for example, that both children and adults used plants as food, as light snacks and as a means of diversifying everyday meals. For example, an entry in the medicinal plant database *Herba* (2008–2012) notes:

*Toorelt sõime lapsena: põrknaid, kaalikad, kurke, kapstajuurika südamikke, sibula pääliseid; mõned lapsed sõid isegi toorest kartulit. Siis veel: ube, herneid, suhkruherneid, hiireherneid ja vikki; riivimise ajal kapsast jne*

As children we ate raw: burdock stalks, turnips, cucumbers, the cores of cabbage stems, onion greens; some children even ate raw potatoes. Also beans, peas, sugar peas, vetch, bird vetch, and clover; during shredding, we ate cabbage, etc.

Proverbs reflect suitable conditions for planting (cf Krikmann *et al.* 2023) (e.g., *Istuta kapsast, et lammas kahe tallega vahel magama sünnib* / Plant cabbage with rows wide enough for a ewe and her twin lambs to lie down between them, type 3201), observations about growth (the most widespread being the motif that cabbage continues to grow vigorously on Michaelmas night / *Mihklipäeva öösel kasvab kapsas veel villase lõnga katki*, type 6827), as well as comments on consumption and cultivation, such as the notion that cabbage needs horse manure to grow and pork fat for proper cooking (*Kapsas on hää asi toiduks küll, aga tahab ikka hobuse perses kasvada ja sea perses keeta* / Cabbage is good food, but it needs to grow in a horse's backside and be cooked in a pig's backside, type 3204). The requirement to add meat when preparing cabbage dishes appears both humorously and in a pragmatic, work oriented tone (*Parem sääse kints kapsas kui üsna ilma lihata* / Better a mosquito's thigh in cabbage than no meat at all, type 11198). The most popular motif (type 6827) highlights cabbage's long vegetation period and its continued growth even in the cool autumn months.

Several elements of earlier food cultures are reflected in sayings and idioms as well—people may be described as *grown together like cabbage and turnip* (EFKA 2004). Reports also mention ornamental plants and decorative shrubs; lilac, for example, is repeatedly noted as a plant belonging to the homestead environment. It is evident, however, that these sources form a complex body of material, with entries scattered across manuscript collections and distributed among folklore genres of different character, function and narrative structure. There are also reports concerning ornamental plants and decorative shrubs; for instance, lilac is repeatedly mentioned as a plant that “belongs” next to the home. Certainly, this represents a complex field of practices, the analysis of which is complicated by the fact that the collected materials are distributed across different folklore genres according to their thematic characteristics, whereas in manuscript collections they often appear randomly intermingled.

Only herbal medicine and plant names can be traced systematically through specialised card catalogues (see the Plant Name Card Index, *Eesti Taimenimed*,

*Herba*), as well as Gustav Vilbaste's manuscript collection (Vilbaste TN). Valuable information is likewise found in corpora of traditions associated with various mythological figures (for example, *lendva* ('witch arrow') and its remedies; *halltöbi* (malaria, or ague) and its treatments; the plague, as documented by Paal 2014, Hiiemäe 1997, Kõiva 2007), as well as within central narrative and belief genres. A preliminary overview suggests that no material has been collected specifically on indoor gardening; this represents a topic for future research. The cultivation of plants in urban space has similarly received little attention beyond that given by landscape architects. At the same time, folklore collections would allow us to examine whether, and in what ways, changes in plant use were recorded, since plant migration — including migration together with people — is a well-established phenomenon. Although the present topic does not directly contribute to the study of biological diversity, it nevertheless helps maintain awareness of "how it is known, how it is protected, and who should protect it, plants" (Corson & Campbell 2023).

Gardening practices have attracted increasing scholarly attention in recent decades, particularly with regard to architectural aspects, but also in connection with suburban home gardening, sustainability and lifestyle changes. Alongside the goal of preserving biodiversity, the cultivation of food plants is especially encouraged, though the aesthetic dimension of plants should not be underestimated.

Studies indicate that both Scandinavia and Estonia are able to produce only 16–24% of the fruits and vegetables they require, due to local climate, soil quality and other factors. At the same time, every effort is made to motivate people to grow more of their own food locally. For example, before the COVID19 pandemic, during it, and after it, Estonia saw an intensive campaign presenting new ideas — including hydroponics — and encouraging people to acquire plants and seeds with the claim that indoor and balcony cultivation offers significant potential, since even potatoes can be grown on a balcony, a windowsill, or in an apartment (Kartuli kasvatamise 2015).

In addition to the Scandinavian context mentioned above, similar tendencies can be observed elsewhere, for instance in cities in Udmurtia, for which statistical data exist. According to the Udmurt researcher Suntsova (2025), windowsill and balcony gardening accounts for approximately 24% of the population in the Volga region and the Urals.

Philosophical, aesthetic, and practical perspectives have changed several times over the past century, making these topics particularly compelling. They allow us to trace shifts in general cultural patterns and values, while interviews add individual polyphony and personal opinions to the overall picture. I provide a brief overview of the use of balconies, windowsills and small balcony gardens for plant cultivation in Estonia. I describe the types of green spaces found in Estonian cities and identify the main factors that facilitate or hinder indoor gardening. The respondents' answers reveal why and which plants are grown indoors and on balconies. A further research task is to determine what kind of stories and narratives accompany plant cultivation, how plants are represented in contemporary folklore, and to map more precisely the relationships that people develop with plants in interior spaces.

## 2. Method

This study seeks to explore what motivates individuals to engage in gardening and plant cultivation in indoor environments, as well as the perceived benefits of hobby gardening. By combining a review of scientific literature with qualitative interviews, the research aims to identify the changing functions of garden plots, the role of indoor and outdoor green spaces and the cultural meanings attached to gardening practices. The analysis draws on folkloristic approaches to interpret narratives and practices, offering insight into the interplay between tradition, modernity and personal agency in the management of green environments.

The literature review includes scientific articles and studies on Estonian gardens published between 2000 and 2024. Articles were retrieved via Google Scholar using keywords such as *balcony gardens, indoor gardening, plants in the flat, community gardens, school gardens, gardens, summer house, and youth*.

For more detailed analysis, I conducted qualitative interviews. The questionnaire addressed the presence of a garden plot, its changing functions, ways of managing domestic green spaces and major transformations. Subsequent questions focused on indoor gardening, including the cultivation of decorative, medicinal, and edible plants on balconies and windowsills, as well as growing seedlings for one's own garden and sharing them with friends and colleagues.

All respondents were informed about the purpose of the interviews. The interviews were conducted between 2023 and 2025. Each respondent owned

either a house suitable for yearround living or a summer cottage used only during the warm season, and all also had a permanent apartment in Tartu. Distances from their workplace in Tartu ranged from 6 to 280 km. Most respondents kept houseplants both at home and at work and cultivated decorative, food and gourmet plants. Transcriptions and responses are preserved in the Estonian Literary Museum's research archive EFITA. The aim of the interviews was to gather baseline material for several studies.

### 3. How Green Are Estonian Cities and Settlements?

For today's urban residents, living spaces are typically located in multi-storey apartment buildings or private houses. In such cases, parks, green corridors, and private indoor gardens provide a unique experiential environment for interacting with plants. Urban green spaces encompass but a wide range of forms: various types of parks; gardens surrounding single-family or multi-family dwellings and higher buildings; school gardens; orchards; and community gardens. They also include green areas such as small forests, agricultural and grassland plots; green barriers such as hedges and tree fences; and spaces associated with specific activities—squares, playgrounds, hiking areas, song festival grounds, stadiums, botanical gardens and green zones around historical buildings or on hillsides. Other shared spaces include cemeteries, churchyards, military areas, and more. The scope of interaction with greenery is thus broader than it may initially appear. Urban landscaping is further regulated by rules that determine the composition of plants. Based on ownership and location, gardens where food plants are cultivated or communal gardens are established can be divided into several main types; however, it also becomes clear that actual food cultivation remains modest in these contexts (cf. Kuperjanov & Kuperjanov 2025). At the same time, cities—following the example of other regions—display a noticeably greater abundance of flowerbeds, hanging baskets and greenery.

In the early 20<sup>th</sup> century, several experimental horticultural stations were founded, and their output reached both fields and household gardens. The Polli and Jõgeva breeding stations played a central role in local plant breeding and consumption, offering varieties adapted to Estonian conditions. Ornamental plants were also acquired from fairs, where local growers, collective farm nurseries and other producers sold their plants. One such cultural landmark is the

Türi Flower Fair, now held for 46 years, where people travelled both to sell and to purchase plants. Through this and other fairs, new varieties developed by private breeders, ornamental plants, clematis hybrids adapted for Estonia (see Vaigla 1982)<sup>1</sup>, and seedlings of fruit and berry bushes spread widely.

In the second half of the 20<sup>th</sup> century, seeds and plants became easily accessible through gardening shops. Later, construction and homeimprovement chains added small garden sections selling seeds and seedlings ranging from ornamental plants to berry bushes and fruit trees. Some grocery stores also sell similar assortments. Plants can still be purchased directly from nurseries and greenhouses, ordered for home delivery, bought at openair markets, or obtained within local communities — especially neighbourhoods. Neither seeds nor plants are prohibitively expensive. However, one major change in the market has come from increased imports from Western Europe, particularly the Netherlands, whose plant stock often does not tolerate the local climate.

One distinctive feature of Estonian home gardening is the significant presence of cultivated wild berries — lingonberries, bilberries, cranberries, dewberries, and others — in balcony boxes and garden plots. Historically, intensive breeding to improve local forest and bog berry varieties continued until the final decades of the 20<sup>th</sup> century. However, because distribution was tied to the Soviet Union and eastern markets (Vilbaste, Raal *et al.* 2021), the situation changed radically in the 1990s: Western European and Scandinavian markets were already saturated, and largefruited but less flavourful American cultivars began arriving in Estonia. As a result, American and Western European berry seedlings pushed local varieties into niche production. This shift indirectly affected domestic plant breeding: several development programmes and centres were discontinued, and some vocational schools, including Tihemetsa (founded in 1925), ceased operation.

To this picture must be added the substantial and understudied sphere of homebased, doityourself plant cultivation — a highly polyphonic and culturally rich domain that reveals the subtle structure of human–plant relationships and embodied horticultural skills. Interviews show that people carefully select the varieties they wish to grow on their windowsill, balcony, in their apartment, garden plot, or summer cottage. The bestperforming plants are used for seed saving, and new seedlings are grown from them for future seasons.

## 4. General Conditions for the Development of Indoor Gardening

**Architectural transformation** over the past century has been rapid. Traditional peasant dwellings remained conservative well into the late 19<sup>th</sup> century (Port 1930, Pärdi 2021, Viires 2008, Viks 1985, cf Henderson-Wilson *et al* 2017), typically featuring small windows; even when newer house types emerged, windowsills suitable for plant placement were still uncommon.

In summer, our windowsill was somewhat wider, and it was typically used for placing a vase with flowers. It may be important to note that these were usually cultivated plants; wildflowers were not used indoors. They were certainly brought home — wood anemones (*Anemone nemorosa*), globe flowers (*Trollius europaeus*), bird's eye primroses (*Primula farinosa*), cowslips (*Primula veris*), oxeye daisies (*Leucanthemum vulgare*) — but the flowers kept in the house were generally cultivated varieties. Wildflowers were considered a different category, and so-called “weed plants” were not brought indoors. Some of the flowers listed earlier might be considered such today, but ours was a modest household, and anything beautiful was acceptable. (Interview 1)

The selection of plants changed at some point in the 1970s — I believe around that time. In autumn, a second pair of windows was installed for insulation, leaving a narrow space between them. During my childhood, some people placed cotton or paper in that space and arranged strawflowers (ölelilled)<sup>1</sup> on top. In newer buildings, windowsills are wide, and people place aloe, cacti, primroses, and other seasonal plants there. (Interview 3)



Figure 1. Plants on a kitchen windowsill in Annelinn. Photo by M. Kõiva, 2025.

#### 4.1. Balkonies, windowsills

Gardens on balconies and windowsills have a long history, dating back to the nineteenth century. For example, in Philadelphia, USA, in the 1870s, the production of so-called plant boxes that were installed on windows began. By the late nineteenth century, windowsill gardening was valued as a form of mass activism that brightened life, taught the use of useful plants, and even made suburbs—rarely invested in—more attractive. From the United States, the movement spread to Europe as one of the initiatives of the women's movement for urban reform. Sonja Dümpelmann (2025) emphasised that this way of using plants fostered connections between people and plants, between interior and exterior spaces, between domestic and public spheres and between urban centers and the periphery. According to her, these innovations were evident but also served to conceal larger social problems.

The main drawback of such balconies is their limited load-bearing capacity. The 21<sup>st</sup> century marked a new period, with efforts to maximize balcony space and introduce rooftop gardens. Beginning in the 1960s, the celebration of International Women's Day triggered an explosive development in floristry (Helsloot 2007, Kõiva 2013). Although the season was still cold in Estonia at that time, the widespread custom of giving flowers—both in workplaces and in the more private sphere of family life—created favourable conditions for the

expansion of the flower trade. This included commercial exchanges between socialist countries as well as local breeding efforts. Alongside forced early spring flowers (daffodils, tulips, hyacinths and others), the cyclamen was particularly valued. It was kept on household windowsills and used to decorate institutions, and it also formed part of family-related customs—all of which contributed to its increased cultural value.

Several exotic holiday plants (such as poinsettias and amaryllises) reappeared as opportunities and traditions of festive decoration expanded. In Estonia, balconies began to appear slowly on brick apartment houses, initially as narrow, half-metre-wide open platforms or enclosed structures integrated into the façade and functioning as practical extensions of the apartment.

Interview excerpts reflect these changes:

I moved various flowerpots to the balcony. I did not want to keep plants indoors, except in the kitchen. I grew up in a detached house with a garden in Tallinn; there were flowers both in the garden and inside the house, but not nearly as many as today. Now people grow far more.  
(Interview 7)

At times, concerns circulated about allegedly harmful exotic plants—such as Sansevieria and certain cacti—which led people to give their plants away and switch to seasonal balcony flowers instead of permanent houseplants.

Balconies extending outward from the façade began to appear during the 1960s–1970s. A common practice was to attach flower boxes to the balcony railing and change the plants according to the season.

In spring I planted early spring flowers—daffodils, then pansies, then other colourful flowering plants—and in autumn I replaced them with heather. They never survived the winter. I always bought new plants. Our flowerbox wasn't very long. Other apartments had boxes as well, though not all. (Interview 12)

With the introduction of new building materials and the spread of reinforced-concrete apartment houses—and only from the early 21<sup>st</sup> century onward—the construction of large balconies and rooftop gardens began as a new architectural approach, first in Tallinn and later in Tartu.

Interviews also reveal a wide range of balcony-related problems, such as unsuitable temperatures for plants, the need for effective irrigation systems, and design constraints:

I love my large balcony very much—I call it my private solarium. But since it faces east, the sun burns everything there. All the plants get scorched. An open balcony also receives rain and storms. I keep a swing there for reading, many plants too, but most of them dry out in summer despite watering. (Interview 22)

My parents eventually had the problem that although they had a large open balcony full of greenery in a quiet area, and it was accessible with a wheelchair, they simply did not care about it. They weren't used to going out onto the balcony. When ill, it requires mental and physical effort. Their caregiver took them there a few times a week to get fresh air. (Interview 5)

We have a closed balcony with shelves for plants, and even a few berry bushes. Not for the berries, but because they are nice and green, and the cats like to lie on the soil. There are also tools, a drying rack, winter tyres. There is practically no room left for us. (Interview 2)

Garden magazines and horticultural advice encouraged people to grow grapes, tomatoes, peppers and similar plants on balconies, but many respondents found these experiments unsuccessful:

We tried repeatedly to grow grapes, tomatoes, peppers and more. The gardening press recommended it, but nothing came of it. Only cherry tomatoes grew there more or less reliably. (Interview 10)

Another practical factor is related to the age and structural limitations of Sovietera apartment buildings: Many apartment buildings are now over 50 years old. Although they have been insulated and fitted with new ventilation systems and utilities, balcony structures still require that plant boxes and other loads be placed along loadbearing walls.

## 4.2. Rooftop Gardens

The major innovation was the introduction of flat roofs (with a slope of up to 5%), which began to be used on buildings constructed from concrete blocks. Until the 1970s, and for some time thereafter, construction practices largely favoured pitched roofs, including mansard roofs (Metslang 2014, 2016). Flat roofs, which started to be used on highrise residential buildings, were initially approached with considerable caution (especially with winter snow loads in mind).

Ongoing scepticism has been reinforced by newer recommendations to convert existing roofs into rooftop gardens. The ageing of older buildings and the limited load-bearing capacity of their roofs—meaning that their use would require additional investment, technical expertise and regular maintenance of any garden established—has prompted both curiosity and hesitation. The establishment of rooftop gardens has taken root slowly, despite strong promotional claims that they can cool buildings, extend their lifespan and provide additional recreational space and areas for growing food plants.

Nevertheless, the development of various types of green roofs has begun, especially in connection with sustainability goals, concerns regarding climate change and the broader promotion of biodiversity; similar developments can be found in other cultural contexts as well (for different arguments, see Jia *et al.* 2024; Babnik & Unetic 2020; Mesimäki *et al.* 2019; Laanemets 2025; Zimmermann 2020; Ortí 2025).

Respondents also expressed their own concerns regarding these new types of gardens:

Our household cellar, built in the 1960s after pre-war models, has a naturally formed rock garden on its roof. No soil has been added, yet various plants grow there. The advantage of the cellar roof is that it has so far maintained itself and offers an attractive appearance. We have occasionally cut down a few maple saplings. (Interview 4)

Questions also emerged about unintended plant growth on roofs:

I must say that the roofs of my buildings with different coverings began to develop moss within a few years. At the moment, it is still rather

modest. I try to clean the roof regularly. Or perhaps these are algae that people refer to? (Interview 8)

Newspapers have published photos of flat roofs covered with moss and bird nests, with other plants developing around them. But whether it is worth cultivating such growth intentionally—I do not know. I enjoy, from time to time, being in a city café together with friends. Twenty years ago there was already discussion that solutions where everyone in a building is a writer or a physicist are not ideal, because people remain in their small circle and lose broader social belonging. Relationships also wear out. In short—this does not seem purposeful to me. (Interview 3)

Honestly, I still don't understand the idea of "grow potatoes on your roof." Perhaps those early zero-energy house concepts and images of cabbage-covered walls were interesting, but beyond that—pure utopia. (Interview 15)

Respondents additionally expressed scepticism about whether southern European rooftop practices could be applied in Estonia:

Of course, it is delightful to sit in a café on the 23rd floor, for example in Spain or Italy, where bushes provide shade and sunshades are used. But would plants survive on our roofs in these winds? Or would storms simply carry them off into the city streets? (Interview 12)

The answers and the personal reflection suggest that rooftop gardens may not suit every lifestyle, and that older roofs may not be ideal — are fully aligned with what research shows: that green roofs require regular maintenance and ongoing cleaning, especially to prevent moss and algae buildup. They require a structurally strong, modern roof designed for added load. Spontaneous moss growth is a sign of moisture problems, not a good foundation for a garden.

Also wind uplift is one of the most significant risks for rooftop vegetation. Without engineered layers (drainage, stabilising edges, properly weighted substrate), plants can indeed be torn off by high winds; light-rooted plants would be far more vulnerable. Flat roofs in northern climates must meet strict requirements to prevent wind damage.

## 5. Results of survey

An interesting aspect of indoor plant cultivation concerns the contrast between the official distribution and purchase of plants and seeds on the one hand, and selfpropagation practices on the other.

Decorating window sills with balcony boxes planted with seasonal plants, flowers, and sometimes even berries (such as strawberries and blueberries) became common in the twentieth century, spreading especially in the 1970s and afterwards. For apartment dwellers, balcony boxes provided an opportunity to personalize their urban homes, while for gardening and market trade they meant the addition of a new product category alongside goods intended for flower beds. Research does not indicate attempts to prescribe which flowers should be grown on balconies; this has always remained an individual choice, depending on the owners' tastes.



Figure 2. Surprisingly tasty garden cress. Photo by M. Kõiva, 2025.

Houseplants and balcony plants are purchased from shops or grown from seed (especially herbs, specialty plants and seedlings intended for outdoor planting), and this is an activity that continues almost year-round, because planting takes place practically continuously. Creating suitable conditions—additional lighting, managing and maintaining watering systems—is a task each person handles in their own way. It is noted that some plants remain indoors or on window sills on balconies, some are moved to the garden, and some are shared with acquaintances and friends.

Today the windowsill has a much more practical meaning than it did in my childhood – it is a place where food plants and herbs are grown. (Interview 5)

These herbs add freshness to food and improve its quality, but it is clear that one cannot harvest from the windowsill every day, only occasionally. Therefore, onions, dill and other herbs for daily use are usually bought from the store. (Interview 9)

The reasons for self-cultivation stretch back further into the past than the respondents remembered. According to them, this was used by their relatives who were born at the beginning of the 20th century or even earlier. Today choosing the seeds and cultivating the plants oneself entails the power to choose oneself whether the plants were worthy and whether the fruits were tasty and of the proper size.

We used to grow everything from seed for a long time; my grandfather collected seeds – at some point we also bought plants. But generally, the seeds were saved for the next year. A plant had to be very special for us to buy something additionally. (Interview 17)

Besides my own flowerbed, I don't really plant much else. But in spring I have seeds on the windowsill, and soon I'll put them into soil so that something can start growing. ((Interview 10)

Buying plants from garden sections in grocery stores, from markets, or from nurseries isn't more expensive than growing from seed. Growing from seed requires energy, watering, and other resources. The condition of the plants must be monitored — they have to be repotted and constantly cared for. I don't have that much time, so I prefer to buy larger seedlings. (Interview 4)

I prefer perennial plants that bloom for several years in a row, but such plants are rarely offered for balconies and apartments. In winter, plants left on the balcony usually freeze. (Interview 16)

The biggest disappointment has been growing peppers, tomatoes and grapes— they don't survive on Estonian balconies. And even if they did, grapes would

need to be the kind of plant with roots in the ground, growing up to higher floors—but they have a height limit. It's acknowledged that mainly hanging plants succeed (though they are often intended for just one season) and small cherry tomatoes, which are mostly decorative. However, local varieties of watermelons, melons and grapes have been bred for open ground.

It became clear that many people began expanding their plant cultivation on balconies and windowsills even before the campaigns of the 2000s, when broader use of balconies for growing plants started to be recommended. The plants grown indoors and on balconies include the following:

**Table. Locations and Corresponding Plant Types**

Location	Category	Plant Types / Examples
On the windowsill	a)	Green plants – no exact data
On the windowsill and balcony	b)	Leafy vegetables without large root systems: lettuce, spinach, Swiss chard, etc.; potted vegetable varieties: tomatoes, cucumbers, zucchini, as well as peas, beans, potatoes.
On the windowsill, in the room, and on the balcony	c)	A wide selection of flowers, including primroses.
Berries on the balcony	d)	Strawberries, blueberries, gooseberries, red currants, and others.
On the balcony, including indoors	e)	Trees and shrubs: mallow or hibiscus, palms, lilacs, small varieties of bird cherry, juniper.

Among herbs, some are traditionally grown in gardens (onion, chives, garlic, dill, mint, parsley), but others—such as bay leaf and pepper—can be bought year-round in any large store, and their cultivation is a new trend. There are also plants that can be grown outdoors but die from frost in autumn (lavender). The reasons given for growing plants independently include aesthetics, comfort, freshness, confidence in growing conditions, the desire to create an original green zone in the apartment and on the balcony and interest in experimentation. At the same time, some plants have acquired new uses: for

example, peppermint, recommended for tea and as a medicinal plant, is now used in smoothies, meat and fish dishes.

The question of when edible berry shrubs and miniature apple trees, as well as lilacs and all kinds of small tree and shrub forms known in Asian culture, migrated to apartment balconies still awaits further research. The initial hypothesis suggests that those who have a large garden around their house or outside the city are unlikely to plant shrubs and trees on a balcony.

## Conclusion

Historically, balcony and windowsill gardening emerged in the late 19<sup>th</sup> century as part of international urbanreform movements, designed to improve living environments and foster connections between people and plants. In Estonia, these practices developed alongside shifts in housing architecture—first modest balconies in Soviet apartment buildings, later larger glazed balconies and, recently, experimental rooftop gardens.

Folklore and historical sources reveal rich earlier traditions of plant use, including wild-plant consumption, seasonal food practices and ornamental plants associated with household identity (e.g., lilac). While folklore collections contain extensive plant lore, they provide little information on indoor gardening; this remains an unexplored research area.

Plant procurement and horticultural development changed significantly during the 20<sup>th</sup> century. The Polli and Jõgeva breeding stations played central roles in developing locally adapted fruit and berry varieties. Later, gardening shops, markets, nurseries, and international imports diversified plant availability, though Western European (especially Dutch) stock often proved unsuitable for Estonia's climate. After the 1990s, American berry cultivars supplanted many local varieties, reducing domestic breeding capacity.

Contemporary interviews demonstrate that indoor and balcony gardening serves multiple functions: aesthetic pleasure, personal wellbeing, the desire for freshness and control over growing conditions and the creation of personalised green spaces in urban homes. Respondents cultivate a wide range of plants—from leafy greens and herbs to berries, ornamentals and small shrubs—using windowsills, balconies, or combined indoor spaces. Seedsaving traditions persist, though many prefer to purchase seedlings for convenience. It reveals

a dynamic field where traditional plant relationships meet modern sustainability discourse, and where individual experimentation coexists with structural limitations. The findings underline the need for further research into indoor plant traditions, plant migration and the cultural narratives that accompany contemporary gardening practices.

## Acknowledgements

The author extends sincere gratitude to all respondents who generously contributed their time, insights and personal experiences. Their reflections and narratives significantly enriched the empirical foundation and analytical depth of this study.

This research was supported by the project EKM 82/20/3 “Narrative and Belief Aspects of Folklore”, whose assistance made the collection, analysis and interpretation of materials possible.

## Notes

<sup>1</sup> At the Türi Horticulture and Beekeeping Society’s annual fair, horticultural companies, nurseries, and private growers sell their products. The fair remains popular to this day.

<sup>2</sup> The common strawflower (*Xerochrysum bracteatum*) is a highly ornamental dried flower originating from Australia, blooming profusely from July until frost. For drying, the flower heads should be cut before they open fully.

## Sources

EFITA - Digital archives, ELM, Department of Folkloristics.

Vilbaste TN – Gustav Vilbaste taimenimede kogu, 1907–1966 (The Plant Name Collection of Gustav Vilbaste), ELM, Estonian Folklore Archives.

## References

Alavoine-Mornas, F.; Girard, S. 2017. Green belts in the hands and minds of farmers: A socio-agronomic approach to farmers’ practices. *Journal of Rural Studies* 56: 30–38.

Babnik, Ines & Unetic, Ines 2020. Historical Gardens as an Inspiration for the Future of Urban Horticultural Gardens. *Urban Horticulture – Necessity of the Future* DOI: 10.5772/intechopen.90350. Ljubljana: IntechOpen.

Banner, Anneli 2019. *Eesti aia ajalugu* (History of Estonian Gardens). Tallinn: Vabaõhumuuseum.

Corson, C. & Campbell, L. M. 2023. Conservation at a crossroads: governing by global targets, innovative financing, and techno-optimism or radical reform? *Ecology and Society*, 28(2).

Dümpelmann, Sonja 2023. Growing Houses: Fusing Nature and Culture in the Early Twentieth Century, – *Roadsides* 010 (2023): 48–55.

Dümpelmann, Sonja 2025. Planting Inside Out: Window Gardening and Civil Rights in Nineteenth-and Twentieth-Century Philadelphia. *Buildings & Landscapes Journal of the Vernacular Architecture Forum*, 32(1): 27–60. DOI: 10.1353/bdl.2025.a954733

*Index of Estonian Plant Names*. Botaanika terminoloogia komisjon koosseisus Toomas Kukk, Urmas Laansoo, Ott Luuk, Sirje Mäearu, Peedu Saar, Sulev Savisaar, Kersti Tambets. Tartu: Eesti Looduseuurijate Selts.

EFKA 2004 = Baran, Anneli, Hussar, Anne, Õim, Asta, Õim, Katre 2004. *Eesti kõnekäändude ja fraseoloogia andmebaas* (The Database of Estonian Proverbs and Phraseology). Tartu: EKM Folkloristika osakond. <https://www.folklore.ee/justkui/>

Gorris, Philipp, Bodin, Ö., Giralt, D., Hass, A. L., Reitalu, T., Cabodevilla, X. & Hannappel, I. et al. 2025. Social-ecological perspective on European semi-natural grassland conservation and restoration: Key challenges and future pathways. *Biological Conservation*, 304 art. 111038. DOI: <https://doi.org/10.1016/j.biocon.2025.111038>

Helsloot, John 2007. Vernacular Authenticity: Negotiating Mothers' Day and Fathers' Day in Netherland. Margry, P. J. & Roodenburg, H. W. (eds.). *Reframing Dutch Culture between Otherness and Authenticity*. Humpshire, UK: Ashgate Publishing Limited, pp. 203–224.

Henderson-Wilson, C.; Sia, K.-L.; Veitch, J.; Staiger, P.K.; Davidson, P.; Nicholls, P. 2017. Perceived Health Benefits and Willingness to Pay for Parks by Park Users: Quantitative and Qualitative Research. *International Journal Environment Res. Public Health*, 14.

Herba = Kalle, Raivo & Sõukand, Renata 2008–2012. *Herba. Historistlik Eesti Rahvameditsiini Botaaniline Andmebaas* (The Historic Estonian Ethnomedical Botanical Database). Tartu: ELM Department of Folkloristics.

Hiiemäe, Reet 1997. Mütoloogilised haigused I. Eesti katkupärimus. (Mythological illnesses I. Estonian plague lore). Tartu: Department of Folkloristics, Estonian Literary Museum.

Jia, S., Weng, Q., Yoo, C., Xiao, H., Zhong, Q. 2024. Building energy savings by green roofs and cool roofs in current and future climates. *Urban Sustainability*, Vol. 4, 23. <https://doi.org/10.1038/s42949 024-00159-8>.

Jüris, Hans 2024. *Rohelised katused magalarjoonis: kestlik linnaarendus Annelinnas* (Greenroofs in Residential Districts: Sustainable Urban Development in Annelinn). Tartu: Eesti Maaülikool, Põllumajandus- ja keskkonnainstituut.

Krikmann, Arvo 2023. *Eesti vanasõnad* (Estonian proverbs). Andmebaas, 2. ed. Tartu: EKM folkloristika osakond. <https://folklore.ee/eesti-utlused/vanasonad/est/>

Kartuli kasvatamise 2015 = *Kartuli kasvatamise ülim juhend potis: samm-sammult juhised*. (The Ultimate Guide to Growing Potatoes in Containers: Step-by-Step Instructions). <https://et.jardineriaon.com/potis-kartulite-kasvatamine.html>

Kuperjanov, Maris & Kuperjanov, Andres 2025. Horticultural Cooperatives in Estonia and Lifestyle Change: The Case of Ihaste. *Yearbook of Balkan and Baltic Studies* 8 (2): 100–117. DOI: 10.7592/YBBS8.2.05.

Kõiva, Mare 2007. *Eesti lendvapärimus* (The witch arrow). Tartu: EKM Teaduskirjastus.

Kõiva, Mare 2013. Calendar feasts: Politics of adoption and reinstatement. Laineste, Liisi; Brzozowska, Dorota & Chlopicki, Wladislaw (eds.). *Estonia and Poland: Creativity and change in cultural communication*. EKM Teaduskirjastus, pp. 187–210.

Laanemets, Desiree 2025. *Eesti Maaülikooli linnaku katuste rohehaljastus: mikrokliima, elurikkus ja puhkevõimalused* (Green Roofs At The Estonian University Of Life Sciences Campus: Microclimate, Biodiversity, And Recreational Opportunities). BA Dissertation. Tartu: Eesti Maaülikool, Keskkonnaplaneerimise ja maastiku-kujunduse õppekava.

Metslang, Joosep 2016. *Katuseraamat* (The Roof Book). Tallinn: Tammeraamat.

Moora, Aliise 1980, 1991. *Eesti talurahva vanem toit* (I 1980, II 1991) (The Traditional Foods of the Estonian Peasantry I, II). Tallinn: Valgus.

Nerman, Robert 2012. *Mustamäe ajalugu 1960. aastate alguseni* (The History of Mustamägi up to the Early 1960s). Tallinn: Robert Nerman.

Nerman, Robert 1998. Lasnamäe ajalugu (History of Lasnamägi). Robert Nerman.

Robert 2012. Lasnamäe ajalugu (History of Lasnamägi). Robert Nerman.

Ortí, Marta Alós 2022. *Urban Ecology: Novel Ecosystems, Novel Challenges*. A Thesis for applying for the degree of Doctor of Philosophy in Applied Biology. Tartu: Eesti Maaülikool.

Paal, Piret 2014. *Halltöbi. Eesti muistendid. Mütoloogilised haigused 2.* (Auge. Estonian legends. Mythological illnesses 2). Tartu: ELM Scholarly Press.

Port, Jaan 1930. *Talu ümbruse kaunistamisest ja taluaedade korraldamisest* (On decorating the surroundings of a farm and organising farm gardens). *Taluperenaine*, 2.

Pärdi, Heiki 1921. *XX sajand – murrang Eesti maa-arkitektuuris* (The 20<sup>th</sup> century as a Transformative Period in Estonian Vernacular Architecture). Tallinn: Eesti Vabaõhumuuseum.

Suntsova, N. 2025. Container Gardening and Windowsill Vegetable Growing: LittleKnown Pages in the Horticultural Practices of the Inhabitants of Vyatka Province. Popova, Elena (ed.). *The Vegetable Garden in Folk Culture: A Collective Monograph*. Izhevsk: UdmFIC UrO RAN, pp. 50–60.

Vaigla, Adolf 1982. *Elulõngad (Clematis Cultivars)*. Tallinn: Valgus.

Viires, Ants 2007. *Eesti rahvakultuuri leksikon* (Encyclopedia of Estonian Folk Culture). Tallinn: Eesti Entsüklopeediakirjastus.

Viks, Artur 1985. *Aiandus väikeaedades* (Gardening in Small Gardens). Tallinn: Valgus.

Vilbaste, Kristel 2014. *Jõhvikas* (The Cranberry). Tallinn: Varrak.

**Mare Kõiva** is leading research fellow of the Department of Folkloristics at the Estonian Literary Museum; her research area are charms, healers, and folk religion, she is currently focused on mythology and multilocal living style.

Email: [mare@folklore.ee](mailto:mare@folklore.ee)

ORCID: 0000-0003-3769-3878