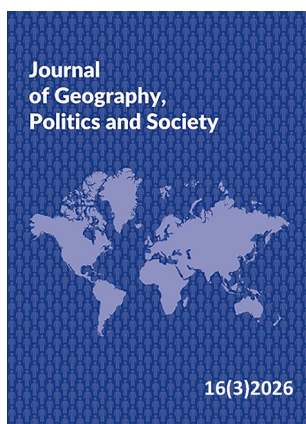




Journal of Geography, Politics and Society

2026, 16(3), 34–44

<https://doi.org/10.26881/jpgs.2026.3.04>



CHANGES IN THE USE OF “MORWA” FAMILY ALLOTMENT GARDEN IN ŁÓDŹ IN 2010–2025

Roman Szkup

Institute of Urban Geography, Tourism Studies and Geoinformation, University of Łódź, Kopcińskiego 31, 90-142 Łódź, Poland,
ORCID: <https://orcid.org/0000-0002-1605-5335>
e-mail: roman.szakup@geo.uni.lodz.pl

Citation

Szkup, R. (2026). Changes in the use of “Morwa” family allotment garden in Łódź in 2010–2025, *Journal of Geography, Politics and Society*, 16(3), 34–44.

Abstract

Since the very beginning of the operation of allotment gardens, the main goal (idea) of their creation was to provide areas for cultivation. Such gardens were created for the poorest families and the families of underpaid workers who, by cultivating garden plots, could support their modest household budgets, sourcing basic produce grown on their own plot. Changes in everyday life, caused by the development of civilization (including cheap food in hypermarkets) and political changes in Poland, contributed to the intensification of the process of a gradual shift in the use of allotment gardens from agricultural production to recreation (Szkup, 2022). The contemporary importance of Family Allotment Gardens (RODs) results from a combination of production, recreational, social and ecological functions. Allotment gardens should also be treated as multifunctional elements of the urban spatial structure whose importance has been changing with the social, economic and spatial changes in Europe (Bell, et al., 2016). This article attempts to present changes in the use of “Morwa” Family Allotment Garden in Łódź, comparing the use of plots in the garden in 2010 and 2025. The article also presents changes in the socio-demographic features of garden users in analogous time cross-sections. These goals were realized by using a direct inventory and a questionnaire survey among the users of the surveyed garden. The results show very clear transformations of the socio-demographic structure in terms of the garden users’ age and gender. The most important change between 2010 and 2025 is the clear aging of the population of “Morwa” ROD users. In “Morwa” Family Allotment Garden in Łódź, a transformation in the use of plots is taking place. There is a gradual shift in the use of the garden from production use related to the cultivation of vegetables and fruits to leisure and recreational use, but the scale of these changes is small compared to the gardens of the Łódź Voivodeship.

Key words

family allotment gardens (ROD), use of family allotment gardens, transformation of family allotment gardens, plot in ROD, Łódź.

Received: 11 April 2026

Accepted: 17 August 2026

Published: 30 October 2026

1. Introduction

Family Allotment Gardens (ROD), referred to in English literature as allotment gardens, urban allotment gardens or allotment gardening, are a permanent element of urban space. Their contemporary significance results from a

combination of production, recreational, social and ecological functions. As pointed out by Bell et al. (2016), allotment gardens should be treated today as multifunctional elements of the urban spatial structure whose importance has been changing along with the social, economic and spatial changes in Europe. The authors emphasize that the contemporary renaissance of interest in allotment

gardening is associated, among others, with the growing importance of green areas, food safety, quality of life and ecological resilience of cities. Allotment gardens also provide economic, social, cultural, educational, health and environmental benefits (among others, Drescher et al., 2006; Nettle, 2010; Perez-Vazquez et al., 2005).

The turning point of 1989 created new conditions for the functioning of RODs. The economic transformation limited the importance of the plot as an indispensable source of food for the household, concurrently increasing the importance of other functions – primarily recreational, leisure and ecological ones. Analyzing the first decade of the transformation, Bellows (2004) draws attention to the change in the importance of food production and the emergence of conflicts regarding the future of allotment areas. With the development of the market economy, areas of RODs, often located in attractive urban locations, began to be also perceived as a potential land resource for other urban functions. This meant a change in the approach to the functioning of gardens: the previous discussion focused mainly on social and production functions, while after 1989 the issues of ownership, land values and the fight for urban space became increasingly important (Bellows, 2004).

One of the best documented contemporary directions of change is the increase in the importance of the recreational (leisure) function of gardens. Direct evidence is provided in the studies by Szkup (2022, 2024), who analyzed the ways of using plots in the gardens of Łódź and the Łódź Voivodeship. The research included an inventory of plots and surveys among their users. The author distinguished two basic models of use: agricultural-production and leisure-recreational. The results showed the spatial diversity of these models – as the distance from the center of Łódź increased, the importance of the recreational model decreased, and the importance of horticultural production relatively increased (Szkup 2022, 2024). These studies are particularly important for the interpretation of changes in RODs in Poland, because they show that the functional change is not homogeneous. Therefore, it cannot be concluded that all allotment gardens have gone from production to recreation to the same extent. The importance of individual functions depends, among others, on the location of the garden, the social structure of its users and the relationship between the central city and the suburban zone (Szkup 2022, 2024).

Similar conclusions result from Mokras-Grabowska's research (2021) conducted in four RODs

in Warsaw. The author showed that the basic motivations for owning a plot are leisure, gardening hobbies and contact with nature, while the production of own agricultural produce is no longer the most important motive for using the plot. Simultaneously, most respondents lived in the immediate vicinity of gardens, which indicates the importance of ROD as a local space for everyday recreation (Mokras-Grabowska 2021).

Research by Maćkiewicz et al. (2021), involving users of allotment gardens in Wielkopolska and Westfalia-Lippe, allows placing Polish transformations in a wider European context. The authors showed that Polish allotment holders more often treat plots as places of rest, recreation and ornamental cultivation, while the function of food production and ecological function are more pronounced among the surveyed German allotment holders. At the same time, the authors emphasize the importance of generational changes that may lead to further changes in the way gardens are used in the future (Maćkiewicz et al. 2021).

Therefore, the research results presented above confirm that the functional transformation of ROD does not mean a simple disappearance of horticulture. It would be more appropriate to define it as a change in the hierarchy of functions: food production still occurs, but it is increasingly one of the elements of a multifunctional use of plots.

Functional changes are accompanied by changes in the way plots are developed. In this respect, of particular interest is research by Klepacki and Kujawska (2018), who analyzed the use of plants by allotment plot holders in three Polish cities. The study showed the existence of 257 plant taxa, of which 191 were ornamental plants, 66 were food plants, and 5 were medicinal plants (Klepacki, Kujawska, 2018). These results indicate the importance of the decorative and aesthetic function of contemporary RODs. Simultaneously, the presence of a large group of useful plants confirms that food production has not disappeared. Therefore, the modern plot can combine fruit growing, vegetable cultivation, ornamental plants, lawn, resting place and objects of small architecture. This is important from the perspective of research on the transformation of use, because the very classification of plots as "agricultural-production" or "recreational" may be too simplistic. It seems more useful to analyze the degree of participation of individual development elements in the use of the plot.

A study by Ponizy et al. (2021) constitutes an important reference point for Polish research. The

study which covered seven European countries – Austria, Estonia, France, Germany, Poland, Portugal and the United Kingdom – showed a significant diversity in the way gardens are used, gardeners' motivation and gardening practices. The authors emphasize that contemporary differences are conditioned, among others, by history, the legal system, socio-economic conditions and the political heritage of individual countries (Poniży et al., 2021). These results are particularly important for the interpretation of the use of plots in Poland. In fact, one must not directly transfer models of development of allotment gardens from Western Europe to Polish RODs. Poland belongs to a group of countries in which the modern model of allotment gardening has been strongly shaped by the experience of the socialist economy, food shortages and the state and company system of garden organization.

Maćkiewicz et al. (2021) also show that the differences between Poland and Germany are visible not only in institutional history but also in the current profile of use and horticultural practices. In Poland, the recreational and decorative function is stronger, while in Germany, food production and ecological considerations are more important.

Based on the literature, two basic levels of changes in the use of family allotment gardens can be distinguished. The first level is a functional change of a single plot. In this case, we observe a transition from food production to recreational, decorative and leisure use. This process is documented, among others, by Szkup (2022, 2024), Mokras-Grabowska (2021), Maćkiewicz et al. (2021) and Klepacki and Kujawska (2018).

The second level is a change in the function of the entire ROD area. It may include the liquidation of the garden, its partial transformation or a change in the way of development resulting from urbanization pressure. This level of transformation is associated with spatial planning, property rights, land value and urban policy. Studies by Bellows (2004), Poniży et al. (2021) and Wiejak-Roy et al. (2025) are particularly important in this respect.

This distinction is of key methodological importance: reducing the share of agricultural production within plots is not tantamount to losing the social, ecological or recreational function of the entire ROD. On the contrary, the garden may lose part of its production function and, concurrently, increase its importance as an element of recreation and green infrastructure.

Based on previous research, the following model of changes in the use of ROD in Poland emerges.

Stage I – 1945–approx.1960: domination of the productive and social function. In the first post-war years, the plot was primarily a source of food and an element of household safety. The recreational function was present but subordinated to production needs.

Stage II – 1960s–1989: coexistence of the production and recreation function. During the period of intensive urbanization and development of employee allotment gardens, there was a coexistence of production, recreation and leisure. In times of economic crises, the importance of food production grew again.

Stage III – 1989–approx. 2010: a growing recreational function. Economic transformation weakened the importance of the plot as a necessary source of food and increased the role of recreation, rest and decorative function. This process is confirmed in subsequent studies of land development methods.

Stage IV – approx. 2010–2020: multifunctionality of RODs. The literature increasingly more often interprets gardens during this period as an element of green infrastructure and the urban recreational system. Research by Speak et al. (2015), Klepacki, Kujawska (2018), Szkup (2022, 2024) and Mokras-Grabowska (2021) shows the coexistence of production, recreational, social, decorative and ecological functions.

Stage V – 2020–2025: increase in the importance of recreation, ecology and housing functions. The COVID-19 pandemic has increased the importance of plots as places of rest and contact with nature (Szkup, 2020; Janus et al., 2022; Kacprzak and Szczepańska, 2024). At the same time, the growing value of urban land and changing user preferences have resulted in pressure to intensify development and change the way plots are used (Wiejak-Roy et al., 2025).

As a result, it can be assumed that the evolution of RODs in Poland ran from the “production and social plot” model, through the “production and recreation plot”, towards the “multifunctional plot: a recreational-production-ecological one”, with the simultaneous emergence in the 21st century of pressure on its partial transformation towards a residential function or intensively built-up private space.

The objective of this paper is to examine transformations in the land use patterns of “Morwa” Family Allotment Garden in Łódź by comparing plot development between 2010 and 2025. Additionally, the paper presents shifts in the socio-demographic characteristics of the allotment users within the same periods.

2. Materials and Methods

The research was conducted in “Morwa” Family Allotment Garden (ROD) in Łódź (Figure 1), in two separate time profiles: 2010 and 2025. The research used a direct inventory as well as a questionnaire survey among the garden users: the first study in 2010 was conducted by R. Szkup, who published its results in the monograph *The use of family allotment gardens (ROD) by the metropolitan community*. An example of Łódź (2013). Using the same research methods and tools, the study was repeated by P. Kolasa in 2025, collecting materials for her own bachelor’s thesis, supervised by R. Szkup.

The interview questionnaire for the allotment users consisted of 10 core questions and 7 socio-demographic questions. It was divided into several thematic sections covering, among others, motives for and methods of acquiring the plot, types of activities on the plot and leisure patterns, as well as the intensity, seasonality, and modes of using the plot. A distinct section of the questionnaire comprised a 7-element personal data sheet on the gender, age, education, place of residence, family status, professional situation, and financial standing of the primary user of the allotment plot. Each questionnaire was supplemented by a plot inventory sheet divided into four sections: basic plot data (size, history, and form of ownership), land-use structure (percentage shares of specific surface types),

characteristics of the cottage/shed (including living area, number of rooms and floors, architectural type, wall and roof materials, technical utilities, and structural modifications), and other on-site investments (such as utility buildings, permanent fencing, garages, greenhouses, and recreational or sports facilities). It is important to note that the findings presented in this article represent an analysis of only a fraction of the comprehensive, long-term survey and inventory data collected by the author across various Family Allotment Gardens over several years.

“Morwa” Family Allotment Garden is located in the western part of the Widzew district in Łódź at 172/182 Pomorska Street, in the immediate vicinity of the Lumumbowo academic quarter (Figure 1). From the north, the garden is adjacent to other allotment gardens and the “Telefoniczna” tram depot complex, from the north-west to the modern Pomorska Park housing estate, and from the east to an area of detached houses. Although the garden borders on an academic settlement, the close proximity of green areas and detached houses influence the peace and quiet in the garden (the microclimate of the garden is probably adversely affected by traffic pollution coming from Pomorska Street).

“Morwa” Family Allotment Garden was established in May 1949 at Nowotki Street (now Pomorska Street). The garden was established in the



Fig. 1. . Location of “Morwa” Family Allotment Garden in Łódź.

Source: own study based on OpenStreetMaps.

area of the former municipal landfill (Szkup, 2013), located between the Widzew-Radogoszcz railway line and the current Pomorska Street. Land for landfill reclamation was obtained from earthwork in the academic estate (the area of today's Lumumby Street). Part of today's garden was located in the auxiliary areas of a nearby prison, where the prisoners were tasked with working for the facility. The very name "Morwa" (Eng. mulberry) was taken from mulberry trees that grew in the surrounding areas, but over the years were cleared. The original land development plan included the creation of sixty-six plots (for which applications from 31 applicants were filed). The garden was managed by the Trade Union Council. In the mid-1950s, the present "Morwa" ROD occupied about 7 ha, and in 1959 already 15 ha. In the years 1965–1970, thanks to the work of garden users, a paddling pool for children was created. In the 1990s, thanks to the joint efforts of the allotment owners and the management board, a common room was built, which now serves as the seat of the garden manager. The area of the allotment garden currently consists of two parts, comprising a total of 292 plots (Szkup, 2013).

In order to determine the most important features that determine the ways of using plots in allotment gardens, the classification and regression of trees (CART) method was applied (see: Klusowski, 2020; Steinberg, 2009; Szkup, Pytel, 2013).

Since in Poland there is no database of legal and actual users of allotment gardens (Moskalonek et al., 2020), the questionnaire survey was not representative. Despite the lack of representativeness, a significant number of questionnaire interviews were conducted – 225 (77.1%) in 2010 and 200 (68.5%) in 2025 (Table 1), i.e. interviews were conducted with 3/4 and 2/3 of all users of the surveyed garden, respectively. In addition, over 90% of all plots in the garden were inventoried in both periods. As the questionnaire interview was conducted in direct contact with the respondents, some of them refused to participate in the research (in both research periods there were about 10% of refusals – they were more frequent in 2025 than in 2010). It should also be noted that despite repeated visits to the gardens, about 1/4 of the plots were not used during the research period (there were no users on the plots).

Among the surveyed users of plots in the garden, there were no persons permanently living or registered abroad. As many as 99.5% of the users were persons living in Łódź; the remaining 0.5% (1 person) was a resident of Zgierz, a town bordering Łódź (Table 1).

Table 1. Socio-demographic structure of the surveyed users of "Morwa" ROD in Łódź in 2010 and 2025 (percentage).

Year of study	2010	2025	Increase / decrease
Total number of plots	292	292	0.0
Number of surveyed respondents	225	200	-25
Percentage of users surveyed	77.1	68.5	-4.6
Gender (percentage)			
men	48.4	41.9	-6.5
women	51.6	58.1	6.5
Age (percentage)			
Median age	65.2	73.4	8.2
20–30 years old	0.0	0.5	0.5
31–40 years old	2.2	0.0	-2.2
41–50 years old	8.9	7.0	-1.9
51–60 years old	19.1	10.5	-8.6
61–70 years old	40.4	19.0	-21.4
71–80 years old	24.1	37.5	13.4
81+ years old	5.3	25.5	20.2
Education (percentage)			
higher	20.4	21.5	1.1
secondary	51.6	58.0	6.4
vocational	17.8	13.5	-4.3
primary	10.2	7.0	-3.2
Occupational status (percentage)			
Retirees and pensioners	81.3	81.0	-0.3
Employees	18.7	19.0	0.3
Place of residence (percentage)			
Łódź	100.0	99.5	-0.5
Bałuty	26.9	17.5	-9.4
Górna	11.7	9.0	-2.7
Polesie	17.5	15.5	-2.0
Śródmieście	22.2	33.0	10.8
Widzew	21.7	24.5	2.8
Other towns	0.0	0.5	0.5

Source: Szkup 2013, own study based on questionnaire surveys of users of "Morwa" ROD in Łódź.

However, within the city, the respondents' distribution between districts has changed. The largest increase was recorded in Śródmieście (from 22.2% to 33.0%), while the largest decrease was recorded in Bałuty (from 26.9% to 17.5%). The representation of Widzew also increased (from 21.7% to 24.5%), while the share of residents of Górna and Polesie slightly decreased.

A comparison of data from 2010 and 2025 indicates quite clear transformations of the socio-demographic structure in terms of the users' age and gender (Table 1). In 2025, the share of women increased from 51.6% to 58.1%, while the share of men decreased to 41.9%. This means an increase in the share of women by 6.5 percentage points. In the case of the Łódź Voivodeship, the predominance of women over men is not surprising. The research conducted by the present author in Łódź allotment gardens in 2008–2014 shows that the gender structure of users of Łódź allotment gardens was very similar to the gender structure of the inhabitants of Łódź, where there is a small surplus of women over men (Szkup, 2013; Szkup, Pytel, 2015).

The small predominance of women may also indicate their greater openness and activity (women were much more willing to answer the survey questions). The surplus of men was clearly visible among users aged 51–70 years old.

The most visible change is the progressive aging of garden users. The median age increased from 65.2 years in 2010 to 73.4 years in 2025, i.e. by 8.2 years. The share of persons aged 71–80 years old increased from 24.1% to 37.5%, while the share of those aged 81 years old and more – from 5.3% to as much as 25.5%. At the same time, the share of persons aged 61–70 years old substantially decreased (from 40.4% to 19.0%), and those aged 51–60 years old (from 19.1% to 10.5%). In 2025, there were also persons aged 20–30 years old (0.5%), while in 2010 they were not recorded in the sample.

The age of the users of the surveyed garden is related to their professional activity (Szkup, 2013, 2022). The structure of professional activity in “Morwa” garden remained almost unchanged in the analyzed period. In both studies, the vast majority were pensioners – 81.3% in 2010 and 81.0% in 2025, respectively. The share of working people increased by merely 0.3%, from 18.7% to 19.0%. This confirms the still strong relationship between the use of an allotment and the group of professionally inactive people.

In both periods, persons with secondary education dominated, but their share increased from 51.6% to 58.0%. The share of those with higher education also slightly increased – from 20.4% to 21.5%. In turn, the share of users with vocational education and primary education decreased (from 17.8% to 13.5% and from 10.2% to 7.0%, respectively). Therefore, one can speak about a gradual shift of the structure towards a higher level of education.

The most important feature of the changes between 2010 and 2025 is the clear aging of the population of users of “Morwa” ROD. It is accompanied by an increase in the share of women and people with secondary and higher education. Simultaneously, the professional structure remains stable – about four out of five respondents are senior citizens or pensioners. In 2025, the garden was

primarily used by the older, mostly female population, strongly represented by senior citizens and pensioners.

3. Results and Discussion

The role that family allotment gardens play in human life is reflected, among others, in the way of developing and using the plot space. The very physiognomy of the plot can say a lot about its owner. A well-kept plot, with maximally utilized and developed space, testifies to the very strong, emotional relationship of the owner with the used piece of land. Anyone who has had an opportunity to visit ROD may notice that nowadays two models of plots dominate in the gardens: typically agricultural and production plots, where vegetables, fruit shrubs and trees predominate (sometimes with small plastic tunnels or greenhouses) and plots with well-groomed lawns, with grassy mini-football pitches and volleyball courts, which are used only for leisure and recreation (Dymek & Bednorz, 2017; Mokras-Grabowska, 2020; Szkup, 2013, 2024).

The analysis of changes that occurred in the use of plots in “Morwa” ROD in Łódź in 2010–2025 leads to the following conclusions: The most plots both in 2010 and in 2025 were agricultural and production areas, i.e. primarily vegetable and fruit cultivation (Table 2). However, their share decreased from 53.6% in 2010 to 48.3% in 2025, i.e. by 5.3%. This means that the production function of the plots in the garden remains dominant, but its importance clearly decreased.

The increase in leisure and recreational area with a concurrent decrease in agricultural and production area indicates a shift in the function of plots from production and gardening to leisure and recreation. Therefore, the plot becomes more a place for spending free time than just a space for growing vegetables and fruits. However, the scale of changes in comparison with other allotment gardens in Łódź is small. As evidenced by Szkup (2022, 2024), in family allotment gardens in Łódź and towns of the Łódź agglomeration, the share of leisure and recreation area in the years 2022–2024 ranged from

Table 2. The structure of land use in “Morwa” Family Allotment Garden in Łódź in 2010 and 2025 (percentage).

YEAR	Structure of plot use (in %), including areas for				
	leisure and recreation (lawns, playgrounds)	agricultural and production (vegetable and fruit)	landscaping (paths, driveways)	wooded/treed (ornamental trees, conifers and ornamental shrubs)	other (e.g. ponds, rockeries, outbuildings)
2025	34.7	48.3	13.7	3.0	0.3
2010	29.1	53.6	11.5	5.6	0.2

Source: Szkup 2013, own study based on the inventory of plots in “Morwa” ROD in Łódź

40% to even over 67%. This can be explained by the current demographic structure of garden users. As previously mentioned, the garden is primarily used by an older population attached to land cultivation, strongly represented by senior citizens and

pensioners. Simultaneously, the ageing of garden users is progressing.

Both in 2010 and in 2025, the gender structure of garden users did not show significant diversity (Table 3).

Table 3. The structure of land use in "Morwa" Family Allotment Garden in Łódź, considering the demographic and social characteristics of the surveyed allotment holders in 2010 and 2025 (percentage).

	Structure of plot area use (in %), including areas for									
	leisure and recreation (lawns, playgrounds)		agricultural and production (vegetable and fruit)		hardscaping (paths, driveways)		wooded/treed (ornamental trees, conifers and ornamental shrubs)		other (e.g. ponds, rockeries, outbuildings)	
Year of study	2010	2025	2010	2025	2010	2025	2010	2025	2010	2025
Gender (percentage)										
men	28.2	34.9	53.8	48.0	11.7	13.9	6.2	2.9	0.1	0.3
women	29.7	34.5	53.5	48.4	11.2	13.5	5.2	3.3	0.4	0.3
Age (percentage)										
20–30 years old	0.0	30.0	0.0	55.0	0.0	10.0	0.0	5.0	0.0	0.0
31–40 years old	32.0	0.0	41.0	0.0	12.0	0.0	15.0	0.0	0.0	0.0
41–50 years old	30.7	50.7	50.8	33.6	11.3	12.1	7.2	3.3	0.0	0.3
51–60 years old	29.3	43.5	53.4	33.5	11.2	17.5	6.1	5.3	0.0	0.2
61–70 years old	29.2	35.0	53.5	50.2	11.1	12.6	5.9	1.9	0.4	0.3
71–80 years old	27.8	31.8	54.6	50.5	12.6	14.6	5.0	2.9	0.0	0.2
81+ years old	28.3	32.6	55.4	51.1	12.1	13.2	4.2	2.8	0.0	0.3
Education (percentage)										
higher	29.8	43.1	53.1	38.7	11.1	14.0	6.0	3.8	0.0	0.4
secondary	29.6	32.9	53.1	49.7	11.8	14.5	5.4	2.8	0.1	0.1
vocational	29.4	35.7	52.2	50.7	12.4	11.8	5.4	1.8	0.6	0.0
primary	27.7	31.5	55.2	52.1	10.0	10.7	7.1	5.7	0.0	0.0
Occupational status (percentage)										
Retirees and pensioners	28.6	31.8	54.2	52.1	11.4	13.0	5.6	3.1	0.2	0.0
Employees	31.2	47.5	50.9	35.4	11.9	13.9	6.0	2.7	0.0	0.5

Source: Szkup 2013, own study based on questionnaire research and inventory of plots in "Morwa" ROD in Łódź

The most interesting changes are visible in the age structure of garden users. In 2010, in all the analyzed age groups, agricultural and production use dominated, reaching approximately 41–55% of the allotment garden area. In 2025, the situation was clearly diversified. In the group of users aged 41–50 years old, the recreational area increased from 30.7% to 50.7%, while the agricultural-production area decreased from 50.8% to 33.6%. A similar trend occurred in the 51–60 years old group – recreational areas increased their share from 29.3% to 43.5%, and production areas decreased from 53.4% to 33.5%. In the groups of 61–70-year-olds, 71–80-year-olds and 81+-year-olds, there is also an increase in the importance of the leisure function, although not as large. In the above-mentioned age groups, in 2025, the share of recreational areas was 35.0%, 31.8% and 32.6%, respectively.

In 2010, regardless of the level of education, the agricultural and production function dominated. Its share ranged from 52.2% among people with vocational education to 55.2% among people with primary education. Recreational areas covered about 28–30% of the area. In 2025, there was an increase

in the share of recreational areas in all groups. The largest increase occurred among people with higher education – from 29.8% to 43.1%, i.e. by 13.3%. At the same time, the share of agricultural production area decreased from 53.1% to 38.7%. Among people with secondary education, recreational areas increased from 29.6% to 32.9%, and among those with vocational education – from 29.4% to 35.7%, and with primary one – from 27.7% to 31.5%. This means that in 2025, with the growing level of education, the tendency to allocate a larger part of the plot to leisure and recreation is more pronounced.

In 2010, both pensioners and employed persons allocated the largest part of the plots for agricultural production purposes – 54.2% and 50.9%, respectively. Leisure and recreation areas accounted for 28.6% in the case of pensioners and for 31.2% in the case of employed people. In 2025, the importance of space related to recreation increased in both groups. Among the employed ones, the increase was particularly high – from 31.2% to 47.5%, i.e. by 16.3%. At the same time, the share of agricultural production area decreased from 50.9% to 35.4%.

The juxtaposition of all demographic and social features indicates a clear transformation of the way plots are used. In 2010, all analyzed groups were dominated by the agricultural and production function, primarily related to the cultivation of vegetables and fruit trees. In 2025, its importance generally decreased, while the importance of leisure and recreation areas, including lawns and playgrounds, increased. At the same time, the share of wooded/treed areas decreased in all the analyzed groups, while the hardscaping slightly increased in most of the groups. The share of the “other” category remained very small.

The seasonality and frequency of visits to the plot also prove the ways of using the gardens. “The more often and the longer persons stay in the garden, the greater the role it plays in their lives” (Szkup, 2013, p. 178). In both analyzed years, there is a clear seasonality of the use of the examined garden (Table 4). The greatest intensity of stays in the allotment garden falls for the spring-summer months, while in the autumn-winter period there is a significant reduction in the use of plots. This is characteristic of allotment gardens, whose use is strongly dependent on weather conditions and the cycle of gardening works.

Table 4. Seasonality in the use of “Morwa” Family Allotment Garden in Łódź in 2010 and 2025

Month/number of days of visit	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Total												
2025	1.4	3.4	6.9	12.1	17.2	21.6	24.4	21.5	13.5	9.4	3.3	1.5
2010	2.1	2.7	4.6	8.2	13.5	19.1	20.7	19.8	13.4	7.3	3.6	2.0

Source: Szkup 2013, own study based on questionnaire surveys of users of “Morwa” ROD in Łódź

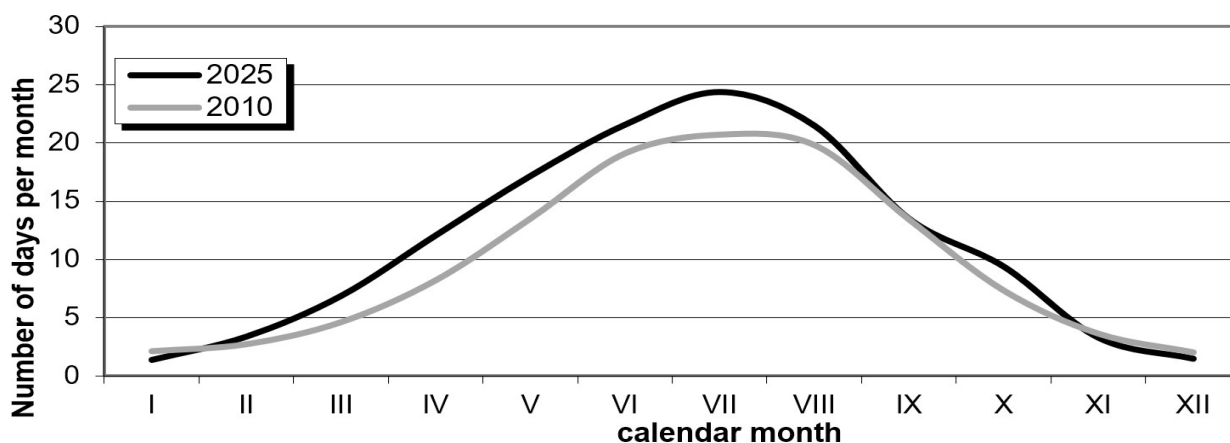


Figure 2. Seasonality in the use of “Morwa” Family Allotment Garden in Łódź in 2010 and 2025

Source: Szkup 2013, own study based on questionnaire surveys of users of “Morwa” ROD in Łódź

In 2025, the largest number of visits was recorded in July – allotment holders stayed in the garden for an average of 24.4 days, in June for 21.6 days and in August for 21.5 days. The relatively high level of use also occurred in May – 17.2 days. This means that the period from May to August was a “high season” in the use of the garden. In 2010, the summer months also dominated, but the maximum values were slightly lower. Most visits occurred in July – 20.7 days, in August – 19.8 days and in June – 19.1 days.

The most characteristic change in the use of the garden in the years 2010–2025 is the increase in the share of visits in the months from March to July. Particularly noticeable was the increase in March – from 4.6 days to 6.9 (+2.3 days), in April – from 8.2 to 12.1 (+3.9 days), in May – from 13.5 to 17.2 (+3.7 days), in June – from 19.1 to 21.6 (+2.5 days) and in July – from 20.7 to 24.4 (+3.7 days). The shift of the

season of use towards an earlier start and later end of the activity of allotment owners in the garden is of particular interest. More days in March, April and October may indicate an extension of the period of using the plots. However, this does not mean the disappearance of seasonality – the summer months are still by far the most active.

As previously mentioned, the level of the users’ professional activity and associated with it their age has the greatest impact on the frequency of visits and the way the plots are used. The rhythm of using “Morwa” ROD significantly differed between employees and retirees. In 2010, the use of plots by employed persons was clearly seasonal in nature (Figure 3). The number of visits to the garden increased from 1.53 days in January to a maximum of 19.07 days in July, and then it gradually decreased to 1.67 days in December. In 2025, the maximum was also in July, but it already reached 22.33 days.

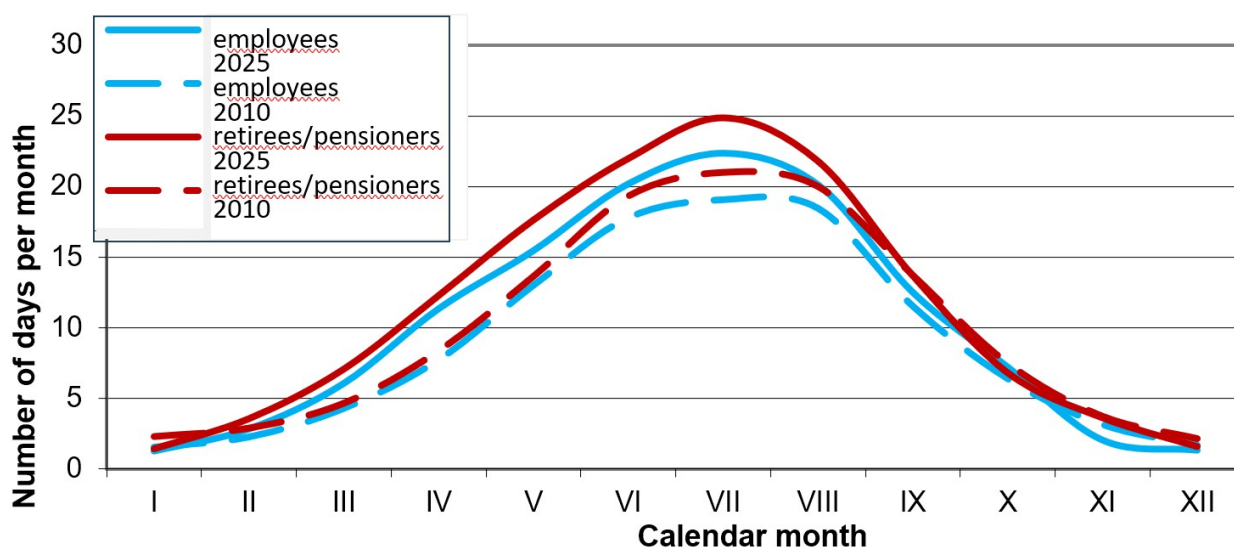


Figure 3. Seasonality of use of “Morwa” Family Allotment Garden in Łódź in 2010 and 2025, taking into account its users’ professional activity

Source: Szkup 2013, own study based on questionnaire surveys of users of “Morwa” ROD in Łódź

High values also occurred in June – 20.16 days and in August – 20.11 days. In the case of working persons, an increase in activity is particularly visible in the period from March to October. At the same time, the January and December values were lower in 2025 than in 2010. Therefore, it can be noted that in 2025, working users used plots more intensively in the high season, and their activity was more focused on the spring-summer period.

The seasonality in the group of retirees and pensioners was even more pronounced. In 2010, the number of days of visits increased from 2.26 days in January to 21.01 days in July, and it then decreased to 2.11 days in December. In 2025, it peaked at 24.84 days in July. In this group, particularly strong growth occurred in the spring and summer months. In March, the visits increased from 4.62 to 7.04 days, in April from 8.34 to 12.25 days, in May from 13.63 to 17.60 days, and in July from 21.01 to 24.84 days. At the same time, a slight decrease occurred in October – from 7.47 to 6.79 days.

The comparison of both periods indicates an increase in the intensity of land use among both socio-professional groups. This is particularly evident in the period from March to September. Therefore, one can talk about the increasing importance of the plot as a place of activity in the spring and summer season. At the same time, these changes in both groups are slightly different in nature. In the case of employed persons, the increase is primarily associated with a higher intensity of stay in the high season, while pensioners achieve an even higher level of land use, which can be associated with a greater availability of free time during the year.

4. Conclusions

The analysis of the collected material indicates that in the studied allotment garden in 2010–2025 there was a change in the model of plot use – there was a gradual shift from the production function related to the cultivation of vegetables and fruits to the leisure and recreational function. This trend is complemented by an increase in the share of hardscaping. At the same time, the reduction in the share of wooded/treed areas indicates that the increase in the recreational function did not take place by reducing the area of crops and ornamental vegetation, but above all by increasing the area of lawns and places intended for recreation. In 2025, almost half of the plot area was still used for vegetable and fruit production, but its share decreased by 5.3%. At the same time, the recreational area increased by 5.6%. This change is independent of gender, age, level of education and professional status, although its intensity varies between the groups. It is particularly strong among working people, persons aged 41–60 years old and persons with higher education. Therefore, it can be concluded that in 2025 the plot increasingly serves as a place of rest and recreation, and to a lesser extent as a place of horticultural production. This is the most important trend resulting from the presented analyses. Simultaneously, it should be admitted that the scale of these changes is small compared to other gardens of the Łódź Voivodeship.

The comparison of both periods indicates that in the years 2010–2025 there was an increase in the intensity of ROD use, primarily in the spring-summer

period. The importance of April and May increased particularly strongly, and the maximum shifted towards July, which in 2025 reached 24.4%, compared to 20.7% in 2010. Therefore, it can be concluded that in 2025, allotment holders used the garden more intensively in the high season and slightly longer in the autumn. However, the analyzed ROD retained the typical seasonal character of use: by far the highest activity falls in the months from May to September, and the lowest one in the winter

months. These changes may again indicate an increase in the recreational and leisure importance of the plots and an extension of the period of active use of the garden.

Acknowledgement

Students at the University of Łódź collecting materials for their own bachelor thesis – Patrycja Kolasa

References

- Bellows, A. C. (2004). One hundred years of allotment gardens in Poland. *Food and Foodways*, 12(4), 247–276. <https://doi.org/10.1080/07409710490893793>
- Bell, S., Fox-Kämper, R., Keshavarz, N., Benson, M., Caputo, S., Noori, S., & Voigt, A. (Eds.). (2016). *Urban Allotment Gardens in Europe*. Routledge.
- Drescher, A. W., Holmer, R. J., & Iaquina, D. L. (2006) Urban Homegardens and Allotment Gardens for Sustainable Livelihoods: Management Strategies and Institutional Environments. In B. M. Kumar, & P. K. Nair (Eds.), *Tropical Homegardens* (pp. 317–338), Springer. https://doi.org/10.1007/978-1-4020-4948-4_18
- Dymek, D., Bednorz, L. (2017). Zagospodarowanie rodzinnych ogrodów działkowych (ROD) na przykładzie ROD im. Józefa Chociszewskiego w Poznaniu (The development of family allotment gardens (FAG) (a case study of Józef Chociszewski FAG in Poznań)). *Studia Miejskie*, 25, 133–147.
- Janus, E., Szewczyk-Taranek, B., & Smrokowska-Reichmann, A. (2022). Perceived functions of allotment gardens and their importance during the COVID-19 pandemic in Poland. *Folia Horticulturae*, 34(1), 1–13. <https://doi.org/10.2478/fhort-2022-0006>.
- Kacprzak, E., & Szczepańska, M. (2024). Will Allotment Gardening Save Us Again? Allotment Gardens during a COVID-19 Pandemic in a City with a Shortage of Plots. *Sustainability*, 16(5), 1981. <https://doi.org/10.3390/su16051981>
- Klepacki, P., & Kujawska, M. (2018). Urban Allotment Gardens in Poland: Implications for Botanical and Landscape Diversity. *Journal of Ethnobiology*, 38(1), 123–137. <https://doi.org/10.2993/0278-0771-38.1.123>
- Klusowski, J. M. 2020, *Sparse Learning with CAR*. 34th Conference on Neural Information Processing Systems (NeurIPS 2020). Vancouver, Canada. <https://proceedings.neurips.cc/paper/2020/file/85fc37b18c57097425b52fc7afbb6969-Paper.pdf>
- Maćkiewicz, B., Szczepańska, M., Kacprzak, E., & Fox-Kämper, R., 2021, Between food growing and leisure: contemporary allotment gardeners in Western Germany and Poland. *DIE ERDE – Journal of the Geographical Society of Berlin*, 152(1), 33–50. <https://doi.org/10.12854/erde-2021-502>.
- Mokras-Grabowska, J. (2021). Contemporary trends in urban allotment gardening: the example of family plots in Warsaw. *Konwersatorium Wiedzy o Mieście*, 34(6), 99–105. <https://doi.org/10.18778/2543-9421.06.09>
- Moskalonek, Ż., Połom, M., & Puzdrakiewicz, K. (2020). Changes in the Function of Allotment Gardens in an Attractive Location Based on the Example of Tri-City in Poland. *Land*, 9(11), 464. doi: <https://doi.org/10.3390/land9110464>
- Nettle, C. (2010). *Growing Community: Starting and nurturing community gardens*. Health SA Government of South Australia and Community and Neighbour and Centers Association Inc.
- Perez-Vazquez, A., Anderson, S., & Rogers, A. W. (2005) Assessing benefits from allotments as a component of urban agriculture in England. In L. J. A. Mouget (Ed.), *Agropolis: the social political and environmental dimensions of urban agriculture* (pp. 239–266). Earthscan and IDRC, London-Sterling-Ottawa, 239–266. <https://doi.org/10.4324/9781849775892-18>
- Ponizy, L., Latkowska, M. J., Breuste, J., Hursthouse, A., Joimel, S., Külvik, M., Leitão, T. E., Mizgajski, A., Voigt, A., Kacprzak, E., Maćkiewicz, B., & Szczepańska, M. (2021). The Rich Diversity of Urban Allotment Gardens in Europe: Contemporary Trends in the Context of Historical, Socio-Economic and Legal Conditions. *Sustainability*, 13, 11076. <https://doi.org/10.3390/su131911076>
- Speak, A., Mizgajski, A., & Borysiak, J. (2015). Allotment gardens and parks: Provision of ecosystem services with an emphasis on biodiversity. *Urban Forestry & Urban Greening*, 14(4), 772–781. <https://doi.org/10.1016/j.ufug.2015.07.007>.
- Steinberg, D. (2009). CART: Classification and Regression Trees. In X. Wu, & V. Kumar (Eds.), *The Top Ten Algorithms in Data Mining* (pp. 179–201). Chapman and Hall/CRC.
- Szup, R. (2013). *Użytkowanie rodzinnych ogrodów działkowych (ROD) przez społeczność wielkomięską. Przykład Łodzi* (The Use of Family Allotment Gardens (FAG) by the Urban Community). Wydawnictwo Uniwersytetu Łódzkiego.
- Szup, R. (2020). Allotment Gardens (AG) in the days of the COVID-19 pandemic. The case of “Żeromskiego” AG in Łask-Kolumna and “Wolinka” AG in Zduńska Wola (Poland). *Journal of Geography, Politics and Society*, 10(4). <https://doi.org/10.26881/jpgs.2020.4.06>
- Szup, R. (2022). Changes in the ways of using plots in allotment gardens in Poland. A case of selected gardens in the Łódź Voivodship. *Journal of Geography, Politics and Society*, 12(4), 33–41. <https://doi.org/10.26881/jpgs.2022.4.04>.

- Szkup, R. (2024). Zmiany użytkowania Rodzinnych Ogrodów Działkowych (ROD) w miastach województwa łódzkiego (Changes in the Use of Family Allotment Gardens (FAG) in Cities of the Łódź Voivodeship). *Konwersatorium Wiedzy o Mieście*, 9(37), 83–92. <https://doi.org/10.18778/2543-9421.09.04>
- Szkup, R., & Pytel, S. (2013). Zastosowanie modelu drzewa klasyfikacyjnego CART w badaniach społeczno-geograficznych (The Application of the CART Classification Tree Model in Socio-Geographic Research). In S. Sitek (Ed.), *Stare i nowe problemy badawcze w geografii społeczno-ekonomicznej. Zeszyt 5* (Old and New Research Issues in Socioeconomic Geography. Vol. 5) (pp. 33–45). Polskie Towarzystwo Geograficzne Oddział Katowicki.
- Szkup R., & Pytel S. (2015). Rodzinny Ogród Działkowy (allotment garden) jako miejsce wypoczynku i aktywności seniorów (Eng. Allotment Garden as a place for seniors' relaxation and activity). In S. Sitek (Ed.), *Stare i nowe problemy badawcze w geografii społeczno-ekonomicznej. Zeszyt 6* (Old and New Research Issues in Socioeconomic Geography. Vol. 6) (pp. 103–113). Polskie Towarzystwo Geograficzne Oddział Katowicki.
- Wiejak-Roy, G., Roy, J., & Smith, D. A. C. A. (2025). Violation of land use regulations for allotment gardens: The case of Warsaw, Poland. *Land Use Policy*, 158, 107728. <https://doi.org/10.1016/j.landusepol.2025.107728>.