

EWA KACPRZAK, BARBARA MAĆKIEWICZ, MAGDALENA SZCZEPAŃSKA

LEGAL REGULATIONS AND DEVELOPMENT OF GERMAN AND POLISH ALLOTMENT GARDENS IN THE CONTEXT OF THE PRODUCTION FUNCTION

I. INTRODUCTION

Allotment gardening in Europe began in the eighteenth century. Germany and Poland were pioneers and leaders in this area. In both countries the development¹ of allotments occurred during the period of intensive industrialization, in other words in the first half of the nineteenth century.² They were allocated to the poor urban dwellers, residing usually in multi-family houses, to improve their difficult living conditions. The main function of allotment gardens was food production for individual purposes, and the secondary leisure function was for people to spend time outdoors.³ Allotment gardening always adapted to social and economic situations. During wars and crises, crops cultivated on plots supplemented the shortage of food provision on the market and the huts became places to live (permanent and seasonal living in order to survive the war, for example a hideout from the occupiers).⁴ Allotment gardening gained in popularity in the times of the socialist economy, both in the GDR and in Poland due to a regular lack of food and restrictions on civil liberties, since they provided an attractive place for leisure and rest.⁵ The socio-economic transformation in the 1990s was characterized by numerous spatial relocations of AGs, a decrease in their number, increased vacancies and abandoned plots, and a steady decline in the importance of the production function of plots.⁶

At present, AGs are treated as an integral part of an effective greenery system in the structure of urban fabric.⁷ Defined in this way, they fulfil vari-

¹ In this case, the term 'development' refers to many issues related to the functioning of AGs – creating regulations, spatial, institutional and infrastructural development (equipment, etc.) and popularizing AGs in the society (including an increase in the number and area of AGs, plot users).

² Appel et al. (2011); Bell et al. (2016): 8–30; Bellows (2004); DeSilvey (2003).

³ Gröning, Wolschke-Bulmann (1995); Kampffmeyer (1926); Bell et al. (2016): 8–30; Lorbek, Martinsen (2015): 102–108; Segers, Van Molle (2014); Spilková, Vágner (2016): 233–225.

⁴ Gawryszewska (2006); Pawlikowska-Piechotka (2010); Nowak (1947): 1–2.

⁵ In Poland, the production of food in AGs was of great importance in the 1980s due to the economic crisis. Bell (2004); Pawlikowska-Piechotka (2009).

⁶ Bewältigung der Leerstandsproblematik (2013); Pawlikowska-Piechotka (2010); Szkup (2013): 11–22.

⁷ Breuste (2010): 463–475; Costa et al. (2016): 202–206; Drilling et al. (2016): 44–48; Poniży, Stachura (2016): 122.

ous cultural-recreational and economic functions for urban residents: social, ecological, environmental and educational, and also provide their users with agricultural produce.⁸ This exceptional production potential and the enormous importance of AGs for inhabitants and urban governments, because they are conducive to implementing the ideas of sustainable urban development and urban agriculture. Thus, many European countries, such as Austria, Denmark, Germany, Poland, Slovakia and the UK, have separate legal acts regulating the functioning of AGs,⁹ while in other countries, for example France, Luxemburg, the Netherlands and Sweden, there are only some specific and limited rules applicable to the activity of AGs. In Belgium, Finland, Norway and Switzerland, AGs are subject to the basic provisions of the Civil Code. According to Calvet-Mir and March (2019)¹⁰ legislation at national, regional and local levels grants allotment gardening institutional recognition. In contrast, in both Germany and Poland its functioning is regulated by special acts – Bundeskleingartengesetz (1983)¹¹ and the Act on family allotments (2013),¹² respectively. Nevertheless, despite existing legislation, it is noticeable that the number of AGs is decreasing in both countries. Moreover, in Poland, the abandonment of food production on AG plots is more striking. In light of the above, this article aims to compare the legal regulations applicable in these countries. The provisions regarding the development and functioning of allotments is subjected to a detailed analysis, as they may be crucial for the implementation of the production function.

An additional and important premise for undertaking research was also the currently observed and intensifying trends related to: the development of the idea of urban agriculture¹³ and food security in cities,¹⁴ changes in consumer awareness (for example, food self-provisioning,¹⁵ food production in urban landscape¹⁶), increasing environmental awareness (for instance sustainable food systems¹⁷) and the lifestyle of inhabitants of large cities (for instance, the motivations and benefits of cultivation).¹⁸

⁸ Breuste, Artmann (2015): A5014005-3; Borysiak et al. (2016): 6–9; Buhtz et al. (2008); Duś (2011): 123–140; Giedrych, Poniży (2013): 35–61; Kronenberg et al. (2013): 53–56; Langemeyer et al. (2016): 117; Pawlikowska-Piechotka (2009): 108; Speak et al. (2015): 779.

⁹ Trembecka, Kwartalnik-Pruc (2018): 5; Weirich (2007): 14–21.

¹⁰ Calvet-Mir and March (2019): 98–100.

¹¹ Bundeskleingartengesetz (1983) vom 28. Februar 1983 (BGBl. I S.210), zu letzt geändert durch Artikel 11 des Gesetzes vom 19.9.2006, (BGBl. I S.2146). Available at: <<https://www.gesetze-im-internet.de/bkleingg/BJNR002100983.html>>.

¹² Ustawa o rodzinnych ogrodach działkowych z 13 grudnia 2013 r., Dz. U. 2017, poz. 2176 [Act on Family Allotments of 13 December 2013, Journal of Laws of the Republic of Poland (JL RP) 2017, item 2176]. <<http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20140000040>>.

¹³ Bell et al. (2016); Boukharaeva and Marloie (2015).

¹⁴ Barthel, Isendahl (2013): 224.

¹⁵ Hoop, Jehlička (2017): 11–12.

¹⁶ Grafius et al. (2020): 1–2.

¹⁷ Goszczyński et al. (2019): 15.

¹⁸ Pourias (2014): 11.

II. STUDY AREA AND METHODS

A comparative study of legal provisions regarding allotment gardening in terms of production function was conducted in Germany and Poland (Map 1). Germany and Poland are pioneers and leaders of European allotment gardening. In 2019, in Germany the overall number of plots was about 1.1–1.2 mln.¹⁹ The largest organization for plot holders in this country is the German Leisure Garden Federation (Der Bundesverband Deutscher Gartenfreunde e. V., BDG). In 2018, they had at their disposal 910,000 plots and managed 40,000 ha of land.²⁰ About 5 mln individuals (plot holders, family, friends and acquaintances) are estimated to use allotment gardens in Germany.²¹ In Poland, there were 4,626 allotment gardens covering an area of 40,400 ha, with 908,500 individual plots²². The national gardening association embracing the majority of Polish allotments is the Polish Allotment Federation (Polski Związek Działkowców, PZD). In 2016 it was estimated that nearly 4 mln people in Poland are considered as plot users.²³

The research was carried out in the Westfalen-Lippe region in Germany (42 AGs, which accounted for 5.7% of the total number of allotment gardens in the region) and in the Poznań district of PZD located in the Wielkopolska Region in Poland (32 AGs, which accounted for 6.2% of the total number of allotment gardens in the region). All the AGs investigated in Germany were managed by BDG, while in Poland by PZD (Map 2). The data were collected from June 2016 to November 2019. The selection of individual AGs was random in both the regions surveyed.

The study was based on an analysis of legal acts and regulations regarding the functioning of AGs in Germany²⁴ and Poland.²⁵ In addition, a query was made of statistical data obtained from the Central Statistical Office and from German and Polish organizations (both national and regional ones) that are directly interested in the functioning of AGs (BGD, PZD, Landesverband Westfalen and Lippe der Kleingärtner eV, Allotment Association in the Poznań district of PZD). The websites of individual AGs were also reviewed, together with press releases and specialist literature. A lot of information of general character, important for understanding the issues studied, was collected during in-depth interviews with the president of the German Federation of Leisure Gardens of Westphalia and the Lippe district (Der Bundesverband Deutscher Gartenfreunde e. V, Landesverbandes Westfalen und Lippe der Kleingärtner),

¹⁹ Kleingärten im Wandel Innovationen für verdichtete Räume (2019).

²⁰ Geschäftsbericht 2015–2018, (2019): <<https://www.kleingarten-bund.de/de/bundesverband/geschaeftsbericht/>>.

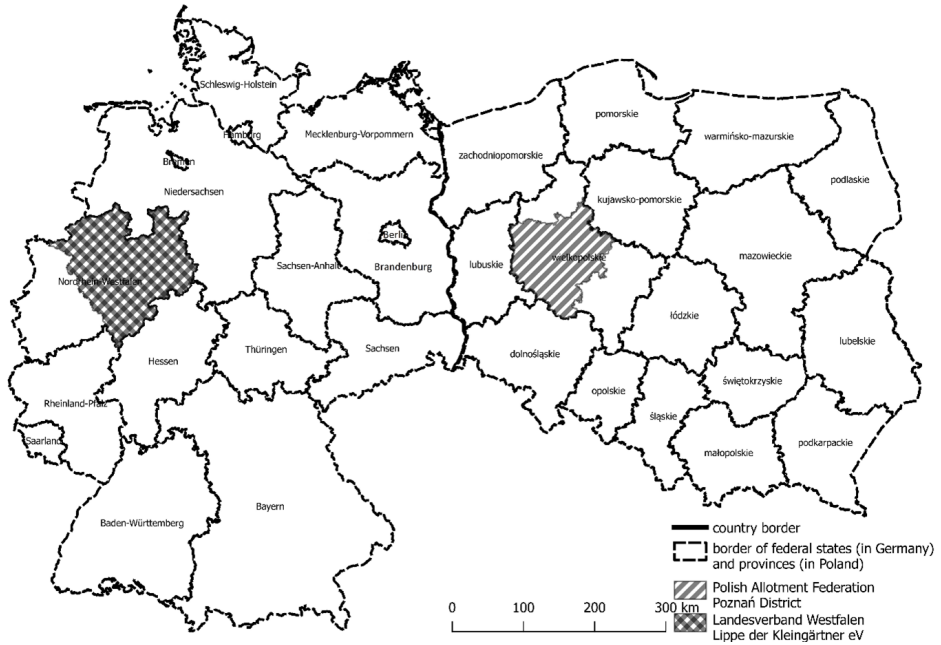
²¹ See at <<https://www.kleingarten-bund.de/de/bundesverband/zahlen-und-fakten/>>.

²² GUS, BDL (2019): <<https://bdl.stat.gov.pl/BDL/start>>.

²³ <<http://pzd.pl/co-to-jest-pzd.html>>

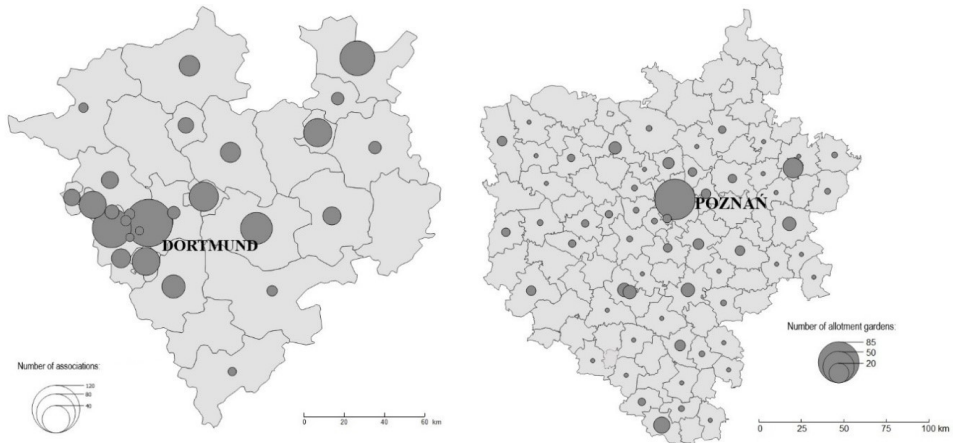
²⁴ Bundeskleingartengesetz (1983) vom 28. Februar 1983 (BGBl. I S.210), zu letzt geändert durch Artikel 11 des Gesetzes vom 19.9.2006, (BGBl. I S.2146). Available at: <<https://www.gesetze-im-internet.de/bkleingg/BjNR002100983.html>>.

²⁵ The Act on Family Allotments 2013.



Map 1. Study area

Source: the authors' own compilation.



Map 2. Allotment associations in Landesverband Westfalen and Lippe der Kleingärtner eV, and allotment gardens in the Poznań district of PZD in 2017

Source: the authors' own study, based on data provided by Landesverband Westfalen and Lippe der Kleingärtner eV and the Allotment Association in the Poznań district of PZD.

the president of the Polish Association of allotment holders in the Poznań district, the Managres of 'Im Spredey' of the city of Castrop-Rauxel in the state of North Rhine-Westphalia, and the 'Rev. L. Przyłuski family allotment garden' in Poznań, in the Wielkopolskie Voivodeship. In addition, a number of study visits and exploratory walks were made, in which a great deal of valuable informal data was gathered. Moreover, a case study method was used for two AGs in the regions surveyed. A case study aims to show concepts worth following and potential errors to be avoided.²⁶ Particular attention was paid to the implementation of legal provisions related to the way plots should be developed (equipment and arrangement), which made it possible to assess German and Polish AG models and also recognising their features and development determinants. Such research allowed us to understand how AGs function and their arrangement in the context of applicable regulations, and thus assess and propose solutions that meet the contemporary needs of city residents

The collected formal data and materials were contrasted with the actual development status of selected gardens in both regions by the making of an inventory, in the form of extensive photographic and graphic documentation.

III. THE LEGAL PROTECTION OF ALLOTMENT GARDENS IN GERMANY AND POLAND

1. The development of legal regulations

The Allotment and Small Holdings Ordinance (Kleingarten und Kleinpachtlandordnung), a regulation of 31 July 1919, was particularly important for the development of German provisions regarding allotment gardening. It offered a uniform legal framework for the first time.²⁷ The first article of this document defined plots as a form of land use and emphasized that they should be used for non-profit gardening. The Ordinance regulated a plot lease, eliminating speculations and abuse of the lease.²⁸ However, it did not cover the question of a plot size and the possibility of building a hut. The recommended size of a plot was specified in the guidelines issued by the Minister of the Economy (Reichswirtschaftsminister) on 1 October 1919.²⁹ This document limited the plot size to a maximum of 625 m² and, at the same time, allowed that the area may be expanded up to 1,000 m² in exceptional cases.³⁰ 'The Allotment and Small Holdings Ordinance' promoted the production function of plots and also ensured a better legal protection of allotment gardening movement. Although it did not fully protect the allotment holders, it was in force in the Federal Republic of Germany also after the Second World War, being a result of the changes introduced beforehand in 1935 and 1940. It was not until 1 April 1983 that a federal

²⁶ Flyvbjerg (2006).

²⁷ Lorbek, Martinsen (2015): S99-S100; Warnecke (2001): 14–21.

²⁸ Nilsen, Barnes (2014).

²⁹ Warnecke (2001): 14–21.

³⁰ Nilsen, Barnes (2014).

act on allotment gardens came into force, following a long period of the application of temporary legal regulations, which emphasized both the production and recreational functions of AGs.³¹ This document, on the one hand, is based on earlier provisions and a long tradition of German allotment gardening while, on the other hand, it is also compliant with contemporary urban and socio-political requirements.³² The act is in force in the old and new federal states³³ and its latest amendment was released in 2006. The German federal act on allotments is often viewed as a model solution for the legal protection of AGs.³⁴ Nevertheless, experts and plot holders have discussed the legal framework of the functioning of German allotment gardening. There are opinions that another amendment to the act is needed because an AG in its conventional form is outdated.³⁵ Seasonal residency on plots, along with the technical infrastructure and the equipment of plots and huts are currently the most controversial issues.³⁶

In Poland, the first attempts to prepare legal regulations on allotment gardening were made in the interwar period and were connected to the operation of the Association of Societies of Allotment Gardens of the Republic of Poland. This organization, under the motto 'Cities build allotment gardens, Societies administer them and the State protects', developed a draft law on AGs; however, the outbreak of the Second World War prevented any legislative work.³⁷ As a result, the first legal act determining the legal basis for the development and functioning of Polish allotment gardening was the decree of 25 June 1946 on allotment gardens (JL RP No. 34, item 208). Under this document AGs were classified as public utility facilities indicating, for example their purpose and the functions of allotment gardening – the possibility of resting and acquiring horticultural fruit for individual needs. It also specified the tasks of AG associations and provisions on the location and the size of allotments and plots.³⁸ The decree drew on the experience of the allotment movement in the interwar period and was therefore quickly repealed in the socialist times. On 9 March 1949, the Act on Employee Allotment Gardens was adopted,³⁹ leading to the centralization of allotment gardening in Poland. It emphasized the health and economic functions of AGs.⁴⁰ Jakowlew and Kuc⁴¹ highlight that the act was 'basic and enigmatic'. A more detailed law was only adopted at the beginning of the 1980s, namely the Act on Employee Allotment Gardens

³¹ Bundeskleingartengesetz (1983) vom 28. Februar 1983 (BGBl. I S.210), zu letzt geändert durch Artikel 11 des Gesetzes vom 19.9.2006, (BGBl. I S.2146). Available at: <<https://www.gesetze-im-internet.de/bkleingg/BjNR002100983.html>>; Lorbek, Martinsen (2015): S99–S100.

³² Kleingärten im Wandel Innovationen für verdichtete Räume (2019); Kleingärten mit Zukunft – Lebenswerte Stadt. Dokumentation Kongress (2007).

³³ Bork (2008); Mainczyk (2006); Mainczyk, Nessler (2019).

³⁴ Lorbek, Martinsen (2015).

³⁵ Kleingärten mit Zukunft (2007).

³⁶ Lorbek, Martinsen (2015): S99–S100.

³⁷ Lubawy (1939); Jakowlew, Kuc (2014): Wstęp.

³⁸ Jamrożek (1997): 53–59; Trembecka, Kwartalnik-Pruc (2018): 5.

³⁹ JL RP No. 18, item 117. Available at: <<http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU19490180117>>.

⁴⁰ Giedrych, Poniży (2013): 35–61.

⁴¹ Jakowlew, Kuc (2014): Wstęp.

of 6 May 1981.⁴² It brought into being, among other things, a statutory legal person – the Polish Allotment Federation, which was to run ‘employee’ AGs on an exclusive basis. The responsibility to provide land for an AG lay with the country’s administration bodies of the basic level, and the size of plots was from 300 to 500 m².⁴³ The next change took place in 2005, when the Act of 8 July 2005 on family allotments came into force.⁴⁴ It contained most of the previous regulations, while among the novelties one should mention the change of the name ‘employee allotment gardens’ to ‘family allotment gardens (ROD)’. It also defined the use of a plot as a basic legal title to the plot of the plot holder, which resulted in a free and indeterminate right to use the plot as well as to collect fruit from it.⁴⁵ The document took into account the health, recreational, social, welfare and environmental functions of AGs.⁴⁶ Jakowlew and Kuc⁴⁷ pointed to the fact that the legal regulations on Polish allotment gardening were repeatedly examined by the Constitutional Tribunal, which ruled each time that there was a discrepancy between at least some of the provisions and the RP Constitution. In the case of the Act on Family Allotments of 2005, the Tribunal found most of its regulations unconstitutional. This led to the establishment of a new legal act which was adopted by the Parliament of the Republic of Poland (Sejm) on 13 December 2013.⁴⁸ This regulates the principles of establishing, functioning and winding up family AGs, the rights and obligations of plot holders, the rules on holding meetings and the tasks of plot holders’ organizations (Article 1). According to the act, AGs serve mainly leisure and recreational functions, as well as health, environmental and social ones. The document was amended twice – in 2015 and 2017. Frequent changes in the abovementioned legal documents which have occurred in the twentieth-first century were examined by specialists,⁴⁹ but they aroused great interest, mainly among plot holders.⁵⁰

2. Contemporary legal regulations and the development of a plot for food production

In both Germany and in Poland, specialist acts on allotment gardening⁵¹ refer to the issue of food production in AGs (Tab. 1). German law defines

⁴² JL RP 1981, No. 12, item 58. Available at: <<http://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU19810120058>>.

⁴³ Jakowlew, Kuc (2014): Wstęp; Jamrożek (1997): 53–59.

⁴⁴ JL RP No. 169, item 1419 Available at: <<http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20051691419>>.

⁴⁵ Jakowlew, Kuc (2014): Wstęp.

⁴⁶ Giedrych, Poniży (2013): 35–61.

⁴⁷ Jakowlew, Kuc (2014): Wstęp.

⁴⁸ Act on Family Allotments 2013.

⁴⁹ Jakowlew, Kuc (2014): Wstęp; Rakoczy (2011): 283.

⁵⁰ <<http://pzd.pl/archiwum/strona.php?1791>>

⁵¹ Bundeskleingartengesetz (1983) vom 28. Februar 1983 (BGBl. I S.210), zu letzt geändert durch Artikel 11 des Gesetzes vom 19.9.2006 (BGBl. I S.2146). Available at: <<https://www.gesetze-im-internet.de/bkleingg/BJNR002100983.html>>; Act on Family Allotments 2013.

the concept of an allotment garden in Section 1 of the Act, emphasizing in the first place its main role in the production of horticultural produce and then indicates the recreational purpose of a plot. The Federal Court of Justice stated precisely in 2004⁵² that the production function should decisively influence the character of a plot and at least 1/3 of its area is to be used for growing horticultural produce. The judgement also stipulated that specific features of a plot, such as the unusual size and topography, or the quality of soil, which in some cases do not allow for the cultivation of crops, may justify a reduction in this area. In the Polish legislation, although the definition of an allotment garden is much more developed (Article 2.5, Article 4, Article 5), the question of food production is limited to the statement that it is possible to grow horticultural crops on a plot (Article 4). Simultaneously, it is stated that a plot serves to 'satisfy the needs of plot holders and their families regarding the cultivation of horticultural produce, recreation and leisure' (Article 2.2).

The German law on allotment gardening is quite general but emphasizes the productive function of an AG. In addition, the case law of the Federal Court of Justice clearly indicates the obligation to cultivate. In Poland, this issue is still not clearly resolved, which contributes to the marginalization of the productive function of AGs. In both countries the regulations are also specified in the rules prepared by particular associations of AGs.

Table 1

The development and functioning of allotments in Germany and Poland: selected legal aspects

Poland	Germany
The definition of an allotment	
<p>Selected area or areas dedicated for family allotments, consisting of plots and a common area for collective use by plot holders, equipped with garden infrastructure (Article 2.5).</p> <p>This is a public utility tool serving the recreational, leisure and other social needs of local community members through equal access to family allotments (ROD) and gardens, allowing them to cultivate horticultural crops for individual purposes, at the same time raising the ecological standards of the neighbourhood (Article 4). They constitute green areas and are subject to the provisions of agricultural and forest land protection as well as those of environmental and natural protection (Article 5).</p>	<p>This is an area for non-commercial use, particularly for the production of horticultural crops for personal purposes and for recreation, and is placed in a complex where such facilities as paths, playgrounds and multi-purpose houses are built (§ 1 (1)).</p>
A garden plot and its development	
<p>The area of a garden plot cannot exceed 500 m² (Article 2.2). A hut – a free-standing recreation and leisure building or other construction fulfilling that function, located in</p>	<p>A garden plot should not be larger than 400 m².</p>

⁵² Urteil des BGH vom 17.06.2004 – Az. III ZR 281/03.

<p>a garden in an allotment with a built-up area of up to 35m² and a height of up to 5m for steep roofs or 4m for flat roofs. The built-up area does not include a terrace, veranda or porch unless their total area exceeds 12m² (Article 2.9a). A tool house with a built-up area exceeding 35 m² and a height of over 5 m for steep roofs and 4 m for flat roofs (Article 13 (1.2)) cannot be erected on a plot.</p>	<p>A simple hut is allowed, with a maximum of 24 m², with a roofed outer surface. It (especially its facilities) cannot be fit for residential purposes (Article 3 (2)).</p>
<p>The rules of garden use</p>	
<p>The right to a plot is established on the basis of a plot lease agreement (Article 27(1)). A lease agreement is for an indeterminate term (Article 28(1)). A garden plot should serve the needs of plot holders and their families for the cultivation of horticultural crops, leisure and recreation (Article 2(2)). It is not allowed to reside in the garden plot, or run a business or any commercial activity (Article 12).</p>	<p>A lease agreement (Articles 4,5,6) Permanent residence on a plot is not allowed (Article 3(2)). When using a plot, one should consider environmental protection (Article 3(1)).</p>
<p>The duties of garden holders</p>	
<p>A garden holder is obliged to keep a plot in a good condition, obey the gardening order stipulated in the regulations, incur expenses related to garden maintenance and garden fees, and use the common area and infrastructure so that other holders can use it and cooperate with them to protect a common good (Article 32).</p>	<p>No information in the Act</p>
<p>Additional regulations on plot development</p>	
<p>The provisions stipulating specific principles of the development and use of a garden, functioning and development of an allotment, and also use of the common area as well as garden infrastructure are defined in allotment regulations (Article 2(7)). An allotment association lays down the rules and regulations of ROD and controls their observance. The rules and regulations apply to all the users present in the area of ROD (Article 14(1–3)).</p>	<p>No information in the Act</p>

Source: the authors' own study based on Bundeskleingartengesetz (1983) and the Act on Family Allotment Gardens 2013.

IV. CASE STUDY

Both German and Polish provisions on the functioning of AGs are included in the European trend towards regulating allotment gardening.⁵³ It should be emphasized that German regulations impose the duty on plot holders to grow horticultural crops and thus limit the technical infrastructure of huts. According to Weirich,⁵⁴ regulations ‘stiffen the development of particular plots, huts and AGs more than in countries with no domestic legal regulations in this regard and plot holders have greater creative liberty in terms of observing

⁵³ Gröning (1996); Trembecka, Kwartalnik-Pruc (2018): 5.

⁵⁴ Weirich (2007): 14–21.

local provisions.’ The Polish act does not demand that horticultural crops be produced, but determines, for example, the size of a hut. In both countries legal regulations are not always met and plot development deviates from the guidelines specified by law, for example Oldengottan⁵⁵ as well as Lorbek and Martinsen⁵⁶ point out the differences between particular states regarding the extent to which huts are equipped with basic infrastructure /facilities. In the case of Polish allotment gardening, what has been emphasized recently among other things is the abandonment of horticultural crops.⁵⁷ In German AGs, despite the official forbiddance, there were cases of adapting huts for residential purposes, setting up concrete paths and evergreen vegetation. Moreover, although allotment gardening is supposed to be non-commercial, there were cases of plot holders selling their produce, although this was on a small scale. In Polish AGs, attention was drawn to: marginalization of horticultural crops, preference for the recreational type of a plot, its isolation, oversized huts, tall plants. Although it is in contrast with regulations, gardeners sell their products too, for example plant seedlings, flowers, fruit (Fig. 1 and 2).



Figure 1. German allotment gardens

A. Hut facilities; B. A concrete path; C. Evergreen vegetation; D. Honey sale.

Source: based on the authors' field study.

⁵⁵ Oldengottan (2007): 50–55.

⁵⁶ Lorbek, Martinsen (2015): S99–S100.

⁵⁷ Dymek (2017): 145–146; Orzechowska-Szajda, Podolska (2013): 82–90; Szkup (2013): 215–230.



Figure 2. Polish allotment gardens

A. An advertisement proving the recreational character of a plot; B. Information proving the allotment isolation; C. Oversized huts; D. Tall plants.

Source: based on the authors' field study.

During the fieldwork and interviews with experts as well as in the direct conversations with some plot holders, suitable data were collected that consequently allowed comparative analysis to be made. The case study covered two allotment gardens: 'Im Spredey' of the city of Castrop-Rauxel in the state of North Rhine-Westphalia, and the 'Rev. L. Przyłuski family allotment garden' in Poznań in the Wielkopolskie Voivodeship. The analysis focused on the assessment of the observance of provisions of basic legal acts on allotment gardening and the land use which was related to the process of food production on a plot.

The allotment garden 'Im Spredey' was established in the 1940s and is presently situated in the southern part of Castrop-Rauxel in the state of North Rhine-Westphalia (about 15 km northwest of Dortmund). The complex has an elongated shape, fits in with the surroundings, and its boundaries are marked by a watercourse and a hedge of hawthorn (Fig. 3 A). Its overall size is 3.2 ha, of which $\frac{1}{4}$ is open to the public (Tab. 3). At the entrance to the garden there is a multi-purpose plot holder's house with a bar, warehouse, a grill hut as well as a playground and training plot performing the educational-integration function.⁵⁸ The garden is equipped with electricity (overhead and

⁵⁸ <<https://castroprauxelwaltrop.kleingarten.de/vereine/im-spredey/chronik/>; <http://www.kgv-im-spredey.de/>>

underground power lines), a water line, a drilled well and a sewage system. In its area there is a reservoir and an apiary on an educational-demonstration plot as well as two compost bins located in the common area. Within the garden there are 48 plots situated on both sides of the main pedestrian path. A characteristic feature is the lack of vacancies. The average size of a plot is about 500 m². All the plots in the 'Im Spredey' allotment garden are recreational/plant-growing in character. Although in the past every piece of land was used for growing vegetables and fruit, nowadays on average 50% of the area of a plot is cultivated. Plot holders adapt to legal requirements – about 1/3 of the garden area is used to grow vegetables and fruit. There are cases of limiting the cultivation area (below the required minimum), but then the garden management intervenes. Usually, the front part of a plot fulfils plant-growing and recreational functions, whereas at the back there is a hut with technical facilities. Now, ecological forms of production are becoming more and more popular, especially among families with children who often draw on the experience of older plot holders. There are some species of fruit trees growing in many of the of AGs, such as apples, cherries and fruit bushes – the most popular are: currants, gooseberries, thornless blackberries, blueberries and chokeberries. In accordance with the regulations, there are no ornamental trees and among decorative bushes hydrangeas and roses dominate. What is characteristic is the presence of German citizens from Kazakhstan, Poland, Ukraine, Latvia, Iraq and Turkey in the community of plot holders (40%). In this case, a plot is the source of produce that is indispensable for their traditional cuisine. They usually try to cultivate the largest possible part of a plot and thus allocate a greater area for cultivation than the average German holder. Plots remain in the hands of one owner for many years, and it also happens that they are handed down in the family (23% of plots). In the area of the allotment garden plot holders organize numerous integration and educational events inviting residents who do not keep gardens. During these meetings attention is paid to the issue of crops and the further use of agricultural produce grown on plots.



Figure 3. Location of the 'Im Spredey' allotment garden: Castrop-Rauxel (A), and the 'Rev. L. Przyłuski family allotment garden', Poznań (B)

Source: the authors' own study on the basis of images from Google Earth.

The origins of the Rev. L. Przyłuski family allotment garden in Poznań dates back to 1933, when the then archbishop L. Przyłuski designated the church area close to Wojska Polskiego Street to be an allotment garden for the poorest residents of Sołacz (currently one of the central and prestigious neighbourhoods in Poznań). In 1956 the garden was moved to the north-western part of the city, in the immediate vicinity of a busy transit road (Lutycka Street) (Fig. 3B). The analysed garden, together with the allotment gardens 'Relaks' and 'Gaj', constitute a compact and fenced complex of green area. They cover an area of 10.4 ha within which a common space makes up about 18% of the overall size of the garden (Tab. 2). The common space is located in the central part (in the vicinity of former fortress buildings). In this place there is a multi-purpose day room with an office and warehouse as well as a playground. The garden is not equipped with a sewage system, although some plot holders have closed septic tanks which are regularly emptied. Almost every holder owns a barrel for rainwater. Compost bins should be on every plot because of the relevant regulations. However, the garden manager stated: 'I am not able to say how many compost bins there are – this is beyond my control.' There is a common container for biodegradable waste. Moreover, once a week on average, a container with a capacity of 7 m³ is ordered, for which plot holders make additional payments. Five plots are permanently inhabited. Some plots are neglected as the result of the old age and poor health of their users. The plot areas vary from 240 to 700 m², with an average of 434 m², and are used mainly for recreational/plant-growing purposes – about 80%. It is rare to encounter plots kept only for cultivation (about 15%). They are run mostly by older persons. Moreover, the importance of purely recreational plots has gradually increased (now about 5%) and they are generally used by young people. On average, there are eight trees on every plot, including different varieties of apples, plums, cherries, sweet cherries and peaches. Fruit bushes are more common, among them the most popular are: currants, gooseberries, grapevines, thornless blackberries, blueberries, chokeberries and quinces. A characteristic feature of the vegetation in Poznań AGs is the presence of ornamental trees (mainly conifers), including different varieties of spruce, firs and larch. However, ornamental bushes, usually evergreen, dominate, such as *arbor vitae*, junipers, euonymus, boxwood, rhododendrons, yuccas, ivy, mahogany and pyracantha. Recently, a growing interest in different kinds of hortensia, heather and lavender has been noticeable. It is worth noticing that even 10 years ago, almost 70% of the overall area of a plot was occupied by crops and four beehives. Currently, the third generation of plot holders is growing up here. The first one, coming from the countryside, was concentrated on cultivating crops. Nowadays, older people leave gardens to the younger members of their family, if they have any, otherwise, or when the relatives are not interested in taking care of it, the plot is sold. New, young plot holders immediately transform it into recreational places (in 2018 only 9 plots changed users).

Table 2

Comparative characteristics of the investigated allotment gardens

Details	KGV Im Spredey	Rev. L. Przyłuski garden
Location (city)	Castrop-Rauxel	Poznań
Year of foundation	1946	1933 (1956)
Overall area (ha)	3.2	10.4
Area of plots (ha)	2.4	8.5
Common area (ha)	0.8	1.9
Number of plots	48	196
Average plot area (m ²)	500.0	433.7
Share of cultivated area (% of a total area of plots)	50	30
Equipment (% of plots):		
greenhouse	31.3	11.7
polytunnel	43.8	6.1
compost bin	100	100
Crops (average number per one plot):		
fruit trees	4	8
fruit bushes	7	10
ornamental trees	0	9
ornamental bushes	5	35
Number of beehives	1	1

Source: the authors' own study on the basis of field research and <<https://castroprauxelwaltrop.kleingarten.de/vereine/im-spredey/chronik/>>.

V. CONCLUSIONS

The analysis of the use of AGs in Germany and Poland indicate its strong relationship with legal norms. In Germany, regulations on allotment gardening are conducive to preserving the productive function. The investigation conducted proved that maintaining and preserving the provisions existing in Germany is necessary, while in Poland the relaxation of land use regulations on plots has led to the displacement of plant cultivation by recreational and residential use. Although it has been stated that one of the main objectives of the AG is meeting the leisure and recreational needs of the society by enabling horticultural crops to grow, there are no guidelines concerning cultivation itself. At present, the requirements are limited to specifying the permissible area of the hut. Therefore, it is necessary to introduce a regulation at the na-

tional level which would specify the principles concerning the obligatory use of part of the plot for food production and the application of pro-ecological solutions in the development of Polish allotments. It seems that there are grounds to do so – PZD has prepared the ‘Open programme of modern development and use of plots to meet the needs of today’s family’ which promotes the cultivation of edible and medicinal plants.

Both AGs analysed have implemented the guidelines of the acts existing in these countries, but to varying scopes and degrees. There is a common space of recreational and integrative character, for example multi-purpose house, playground. The AGs near Dortmund, with their development and the presence of garden facilities, fulfil production and recreational functions. Polytunnels and greenhouses are typical for German AGs. The rules of designating 1/3 of a plot for horticultural crops are observed. On the other hand, the development and vegetation of allotment gardens in Poznań reveals that the production function is tending to disappear in favour of recreational and decorative uses. This is particularly visible in numerous lawns and trees, as well as evergreen and decorative bushes. What is especially worrying is the lack of control in terms of composting garden waste and water retention. The research carried out has shown that some provisions of basic legal acts are not strictly observed. Therefore, in both countries one needs to avoid the excessive development of technical infrastructure and huts because it leads to growing maintenance costs, limited access to plots due to economic reasons (for example maintenance costs and an increase in the price of plots) and the spread of unfavourable social phenomena, such as permanent or temporal habitation. In these circumstances, allotment associations should make a special effort to ensure that plot holders comply with the regulations, enforce the law and create a positive image of AGs in the public awareness.

The inclusion of food production in AGs legislation is also of paramount importance in view of the increasing importance of access to ‘healthy’, ‘good’ food. Nowadays, especially in the Global North, the food issue concerns not so much the scale of production as its quality, along with environmental and social aspects.

Ewa Kacprzak
Adam Mickiewicz University, Poznań
ēja@amu.edu.pl
<https://orcid.org/0000-0003-4012-3956>

Barbara Maćkiewicz
Adam Mickiewicz University, Poznań
basic@amu.edu.pl
<https://orcid.org/0000-0002-1976-3556>

Magdalena Szczepańska
Adam Mickiewicz University, Poznań
szmagda@amu.edu.pl
<https://orcid.org/0000-0003-4236-0859>

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LEGAL REGULATIONS AND DEVELOPMENT OF
GERMAN AND POLISH ALLOTMENT GARDENS IN THE CONTEXT
OF THE PRODUCTION FUNCTION

Summary

Allotment gardens (AGs) serve various socio-cultural, ecological and economic functions, mostly for the urban community, and they also provide agricultural produce for their users. German and Polish legislation includes this function in the definitions regulating allotment gardening. The article aims to compare the legal regulations for allotment gardening in operation in Germany and Poland. This study analyses legal acts concerning the development and functioning of allotments, since they may greatly influence their production function. Moreover, field research and structured interviews were carried out and, as a result, the collected data were contrasted with the actual state of development of selected allotments. The study shows that some of the provisions of legal acts, both German and Polish, are not strictly adhered to by the users. Also, the

analysis of use of allotments in both countries reveals the strong influence of the present legal norms. The regulations concerning allotment gardening in Germany are conducive to preserving plant cultivation, while in Poland unclear provisions on the way in which crop cultivation is to be developed have led to a replacement of the farming function by recreational and residential uses. It is necessary, then, to maintain and observe the existing regulations in Germany. In Poland, on the other hand, there is a strong need for a regulation at the national level which would specify the principles regarding the obligatory use of part of a plot for food production.

Keywords: allotment gardens; legal regulations; development of allotment gardens; production function of allotment gardens; Germany; Poland

