



## “Innovativeness of Rural Territories in Urbanised Areas” conference report<sup>1</sup>

On 29–30 June 2017 the 7th International Scientific Conference “Innovativeness of rural territories in urbanised areas” was held at the University of Agriculture in Krakow. The subject of the conference were diverse aspects of the operation of small agricultural holdings in rural areas in the process of urbanisation as well as urban and suburban agriculture. The conference was organised by the Agricultural Advisory Centre in Brwinów, Krakow Branch Office and the European Research Centre of Small Agricultural Holdings at the University of Agriculture in Krakow. The conference received the honorary patronage from the Minister of Agriculture and Rural Development, Krzysztof Jurgiel and the Rector of the University of Agriculture in Krakow, Professor Włodzimierz Sady. The project was financed within the Network for innovation in agriculture and rural areas.

250 people, including representatives of farmers and chambers of agriculture, members of non-governmental organisations operating in rural areas, representatives of academia, farm advisory services, government agencies, and entrepreneurs from industries related to agriculture, participated in the conference. The participants listened to presentations of researchers, non-governmental organisations experts, and advisors from: Poland, Austria, Germany, Spain, Romania, Lithuania, Ukraine, and Bulgaria. The sessions were divided into the plenary session and two thematic sections: “Agriculture in Urbanised Areas – Looking for Innovative Solutions” and “Location as a Determinant of Changes in the Agriculture of Urbanised Areas”.

The problem of growing dynamics of urbanisation processes of rural areas in suburban zones, in particular close to large cities was discussed many times. The fact that in the EU member states, these areas together with the core cities of agglomerations constitute up to 20% of the total country territory was emphasised, as well as the fact that agricultural land dominates in these areas, constituting 40 to 60% of them. Both the speakers and the participants stated that the perspective of changes in urban

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and suburban agricultural land use and the decline of suburban arable land resources is alarming. Forecasts indicate that within the next 30 years, European urban areas will be increasing by 0.5 to 0.7% a year and the areas functionally linked to towns (suburban areas) will increase two-fold. These trends demonstrate that the importance of the problem of structural and functional changes in urban and suburban areas, including the ongoing regress of agricultural activities, will increase.

As stated during the sessions, in 2007 the urban population exceeded 50% of the total world population for the first time in history and the forecasts say that in 2050 as much as 6 billion people (over two thirds) will live in cities. This is a great challenge for the agriculture economy in the cities and fast expanding suburbs. The consequences of the increase of population size and enhanced migration processes will be completely different for the countries of the affluent north, "dry south", and developing countries. In poorer countries, slums will probably expand and the poorest rural immigrants will use small pieces of empty urbanised land to produce food due to hunger. Thus, urban and suburban agriculture in these countries will have mostly food production functions and its environmental or social functions will be reduced. In Poland and other Eastern and Central European countries, the processes of suburbanisation and dynamic population growth in suburban areas are likely to occur in the upcoming years. This will result in even greater pressure on agriculture and rural areas surrounding cities, which will probably lead to their marginalisation and weakening of their production, social, and environmental functions in many countries. The fact that agriculture production, in particular animal production, in suburban areas is a cause of conflicts was emphasised multiple times during the conference. Particularly in municipalities with new settlements of migrant population, dust from field works, traffic of tractors and agricultural machines, and smell from animal production holdings are disturbing for other residents.

Speakers and participants emphasised that at present in Poland, agriculture development and support in suburban and urban areas are almost absent in the broadly understood economic policy, including agricultural policy. Rural areas within the functional urban areas are subject to strong processes of structural changes and urbanisation pressure leads to their production de-agrarianisation and enhanced processes of excluding land from agricultural production. In some cities, even 50% of the arable land is not used for agriculture purposes as set-asides or shrub bushes, as well as illegal landfill sites, increasing the risk of fire. In suburban areas, they constitute 15% to 25%, which is even twice as much as in rural areas. The theses of the German and Austrian speakers' presentations indicate that maintenance and the development of different forms of agriculture and holdings in urban and suburban areas is a challenge also in these countries. Nevertheless, in many wealthy Northern European countries the importance of urban and suburban agriculture was noticed as early as in the 1970s, which is demonstrated by the solutions used in: London, Paris, Lyon, Vienna, Stuttgart, or the Ruhr. In these (and many other) cities, numerous actions were undertaken to protect or even restore agriculture. The British concept of UK's *Green Belts*; the Copenhagen *Finger plan*, or *KuLaRuhr-Nachhaltige urbane Kulturlandschaft in der Metropole Ruhr*, carried out in the Ruhr were mentioned. In the majority of the developed countries, broadly understood urban and suburban agriculture holds an impor-

tant place in spatial planning. Its state and changes are monitored on an ongoing basis and the self-governments of the agglomerations support agriculture protection and development. The speakers emphasised that in Polish strategic and planning documents created by rural and suburban municipalities, the importance and functions of agricultural land, which are invaluable according to many scholars and practitioners, are practically ignored.

Among the premises of the development of urban and suburban agriculture, its environmental, social, economic, and – to a lesser extent – functions were mentioned. The benefits of biodiversity protection (preserving habitats of wild animals and unique plants), climate protection, preservation of attractive open areas that can serve as a resting place for the urban population, and the problem of food security in large agglomerations were emphasised. According to the speakers and participants, agricultural areas should be the components of the ecological network, in particular of green rings surrounding urban areas. The maintenance and restitution of utilised agricultural areas within the “green rings” as structures excluded from further building development may have an important composition and structure-forming role. It will also have a positive influence on the ventilation of cities and allow for the migration of many species of plants, animals and fungi.

The participants pointed to the problem of the lack or the poor quality of specific land development plans in Polish cities and suburban municipalities. Assigning areas of land that are too large to housing (current land reserves allow for settling even up to 300 million people) in the specific land development plans negatively affects the landscape and biodiversity, as land undergoes natural succession. The problem is that often these areas are not fully used neither for agricultural nor for non-agricultural purposes. In municipalities without specific land development plans, arable landowners usually count on obtaining a zoning fee and expect land prices to grow, which makes land transfers in agriculture, i.e. expanding the area of agricultural holdings, practically impossible. Farmers usually cannot afford land in the suburban areas and short-term leases does not allow the long-term development of holdings. In southern Poland, immense fragmentation of land makes leasing even more difficult, because one farmer would have to sign several dozens of contracts to create a holding of several dozen hectares and conduct economically substantiated agricultural production.

During the conference, the necessity to build a system of agricultural production space information was also mentioned. Among the tools useful for that purpose, diverse thematic maps and photogrammetric materials (orthophotomaps and airborne scanning data) allowing picturing the problems of urban and suburban agriculture, which should be considered in environment management, were indicated.

German speakers emphasised that the effectiveness of maintenance or even restitution of agriculture in the areas in the process of urbanisation will depend largely on the farmers' adaptation to the new economic conditions. They presented five main strategies of development of the holdings, including: diversification, differentiation, specialisation (combined with cost minimisation), share economy, experience offering, and innovations. They demonstrated that in the Ruhr, agricultural holdings using these strategies alternatively or jointly achieve economic success. They emphasised

that adjusting the business model of agricultural holdings to specific urban conditions allows maintaining agricultural production even in highly urbanised areas.

Discussing the conditions of agriculture development in urban and suburban areas in Austria, the importance of innovations, introduced mainly by farmers carrying out their activity in highly urbanised areas was pointed out. Major impediments of agricultural production in the areas in the process of urbanisation necessitate new organisational and technological solutions, which are also stimulated by the knowledge and quality of human capital of urban and suburban farmers. Specific interaction between the agriculture and urban environments create a wide range of opportunities and challenges for innovation development. They might concern different actions aiming at the maximum use of organic waste, redundant in urban areas, using the excess of rainwater, or aquaponics development and many other innovative projects, including technological innovations. There are also many organisational innovations in urban and suburban areas. In several presentations, the cooperation of producers was considered an opportunity for such innovative solutions. The importance of alternative food chains development and the cooperation of farmers and food consumers was emphasised. The concept of the community-supported agriculture (CSA) as well as the key role of farmers' integration and distribution channels shortening were mentioned. The benefits of proximity of the sales market for urban and suburban agriculture were pointed out. This provides the opportunity of direct sales from agricultural holdings, trading at open-air markets, and offering diverse services such as educational, gastronomic, and tourism services. Such solutions are already used in Eastern and Central Europe (as well as in Western Europe). An important innovation is the creation of agricultural holdings offering the services of care for older and sick people, childcare, educational courses, etc. Therapeutic and educational gardens, where contact with nature is supposed to increase the well-being of inhabitants are being opened in city centres.

Agricultural production location theories were also discussed during the conference. The speakers pointed to the fact that horticulture production, particularly of vegetables and decorative plants, has developed around the majority of urban agglomerations in Poland. In some municipalities, such as Igołomia-Wawrzeńczyce situated east of Krakow, horticultural crops occupy almost half of the arable land. The importance of maintaining agricultural production, in particular horticulture, for optimal or at least minimal food security of the cities was emphasised.

The topic of allotment gardens was also discussed. The fact that allotment gardens in Polish cities represent urban and family tradition, because their current owners are often the second or even third generation of users of a given allotment garden, was emphasised. For many families with low income, in particular pensioners, allotment gardens are practically indispensable for social and cultural reasons. They are a source of fresh fruits, vegetables, and flowers, and often give an opportunity to spend free time without additional costs. Moreover, allotment gardens allow for recreational activities, have positive effects on social activity and interaction of their users regardless of their age or social status, as well as on the quality of the environment of the residents of urbanised areas. Gardens have high biodiversity, which makes them important for urban ecology as flora and fauna habitats. Additionally, they mitigate

adverse microclimate elements and are an important place for the local community, strengthening family and social relations. Green and peaceful, allotment gardens are a place of active leisure, everyday recreation, and promotion of a healthy lifestyle. The main problems related to the future of urban allotment gardens concern current institutional agricultural policies, land use rules, and the attitude of the local authorities towards these gardens. Allotment gardens are often located close to the city centre, which makes them attractive for developers, which puts their future at risk.

During the conference, the activity and achievements of the following institutions and organisations related to agriculture was presented: the Agricultural Advisory Centre in Brwinów, Krakow Branch Office, the University of Agriculture in Krakow, the Agency for Restructuring and Modernisation of Agriculture, the Agricultural Market Agency, the Małopolska Agricultural Advisory Centre in Karniowice, the Agricultural Social Insurance Fund, and the Małopolska Chamber of Agriculture. On the second day of the conference, two study tours presenting agriculture in areas in the process of urbanisation took place. During the first tour, the participants could verify and expand their knowledge, as well as look for inspiration visiting the "Pasternik" Family Allotment Gardens, Experimental Department of the Animal Technology Institute in Balice (rabbit farm), and the "Ranczo Artemidy" Educational Farm. The second tour included a visit in the "Nowalijka I" Family Allotment Garden and a presentation of the model of operation of agricultural holdings in suburban areas based on Mr. Krzysztof Ciesielski's holding and Messrs. Krzysztof and Ryszard Gorzałczany's holding.

## Key conclusions, postulates, and recommendations

1. Together, urban and suburban areas constitute over 15% of the territory of Poland and they will get larger. Almost 50% of the land of these areas is agricultural land and a significant part (even over 50% in some places) is excluded from agricultural production as set-asides with shrub bushes or spontaneous afforestation and wasteland. Therefore, extensive research and social discourse, as well as the inclusion of local self-governments into the creation of solutions preventing the processes of abrupt de-agrarianisation of agricultural land in urban and suburban areas is necessary.
2. The phenomenon of the reversion of Thünen circles known from the agriculture location theory is observed around large cities, in Poland usually surrounded by fragmented agriculture and small agricultural land plots, when the quality and agricultural value of production space is low. Due to the frequent lack of land lease, land is quickly excluded from agricultural use, is not attractive for leaseholders (small agricultural land plots), and the expected location factor and zoning fee related to changing land status, as well as an emotional connection with land passed down from generation to generation prevent it from being sold to neighbours. Thus, more and more rings of set-aside and shrub bushes form around cities. The instruments of agricultural policy used so far, including direct payments and national instruments, mostly tax-related, do not work. Therefore, it seems reason-

- able to introduce new or modify existing financial and legal instruments in order to restore the productivisation and use, even extensive, of city surroundings.
3. The maintenance and development of urban and suburban agriculture need appropriate institutional and legal support preventing excessive and insufficiently controlled urban expansion. In urban and suburban municipalities (in particular bordering large cities), special agricultural and/or forest zones categorically excluded from further building development should be introduced based on the solutions used in Western Europe. This will improve the micro-environmental conditions of the urban areas, including their ventilation, and often attractive, publicly available land will serve all the residents.
  4. Agricultural land as a public good, in particular good quality and agricultural suitability soils should be legally protected and their agricultural use maintained, as they substantially improve the quality of the environment, living conditions, and food security. The effectiveness of these activities requires them to be supported by additional assistance instruments, such as financial instruments from the regional (Marshal's Offices) or urban self-government levels. Moreover, urban agriculture should be identified more clearly in the new agricultural policy in order to gain dedicated assistance instruments instead of provisions excluding or limiting the possibilities of support.
  5. Western European countries have been trying to solve the problem of food security of large metropolises for many years by creating special strategies aiming at making cities at least partially independent on the food supply from distant places. In Poland, no city has such a strategy and their self-governments (and presidents) are not aware of the need to prepare them. Thus, adding a point concerning the food security in urban agglomerations to the new regional agriculture development strategies created by the Ministry of Agriculture and Rural Development is worth considering.
  6. Following the example of wealthy European countries, including their large cities, Poland should introduce diverse innovative solutions regarding organisation, production, market, marketing, and new multi-functionality in order to maintain or even develop the functions of agriculture and agricultural holdings in urban and sub-urban areas. Thus, working towards the adaptation of the solutions proven effective in Europe to Polish conditions, developing the strategies of urban agriculture management, including specialisation, cooperation, and connection with the local market, as well as income sources and production directions diversification seems reasonable.
  7. It would also be appropriate to elaborate innovative solutions of maintaining the agricultural use of land in areas in which production de-agrarianisation is advanced and plough tillage has been abandoned. The new alternative approach to use accumulated (neighbouring) set-asides might be the introduction of joint sheep (or goat) rearing, biomass collection for energy purposes, humus production, institutionalised mowing of set-asides (transitional measures), or economic encouraging of land owners to lease their land in order to maintain its agricultural use.

8. Allotment gardens in Polish cities, particularly large and very large ones, form important oases of decorative and productive green areas not financed from public resources (taxes), but by private users. They play environmental, recreational, and even food supply roles, so their function in urban areas should be more appreciated. Their liquidation, even due to important social needs such as the development of technical (e.g. road construction) or social (kindergarten construction) infrastructure should always be compensated with the creation of new allotment gardens. Selling the ground of the allotment gardens to private investors building new housing estates should be absolutely unacceptable.
9. The problems of urban and suburban agriculture have been neglected in Poland for decades and agriculture in urbanised areas and areas in process of urbanisation is considered insignificant, fading, inadequate, or even completely useless. Therefore, undertaking actions leading to the promotion of the essence and idea of urban and suburban agriculture, including the presentation of a wide range of advantages of maintenance and restitution of agriculture that has economic, environmental, and social functions is necessary. Its maintenance should have a positive impact on the reduction of conflicts between suburban agriculture and people moving there from urban areas.
10. The participants of the conference pointed out that the base of factual data, information, and scientific knowledge on urban (and suburban) agriculture is small. It proves that inventory and study works on the concept of its maintenance, new multi-functionality and adequacy, management, etc. are needed. They should be supported by ministry funds.

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