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SPIN-FARMING – A TOOL FOR RURAL DEVELOPMENT

SPIN-FARMING – NARZĘDZIE ROZWOJU OBSZARÓW WIEJSKICH

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Abstract. The current research paper takes a look at back-yard gardening practices within the Serbian- Hungarian border region with the intention to evaluate the role of the inner settlement gardens in rural development through promoting self-sufficiency and potential commercialization. The project aims to explore possibilities for promoting spin farming as a tool for development in rural communities by exploiting unused capacities, encouraging local and household self-sufficiency, generating supplemental income and popularizing traditional, hand-crafted, local and bio-products. Results of the survey conducted in the area are presented along with possible future actions utilizing information obtained during the project.

Introduction

In the past two decades the owners of inner settlement gardens have become unaccustomed to cultivating their gardens and keeping animals around the house. It is especially true for gardens in towns, since as the political and economic system has changed, big chains and hypermarkets took over supplying most of the food products. Gardens are instead planted with perennial ornamental plants and annual flowers. During this process, knowledge of cultivating these gardens is slowly disappearing as the experienced older generation cannot pass this know-how on to younger generations who exchanged the countryside with city life. Domestic trends are also confirmed by an international survey which indicates the decrease of production around the houses and in the so-called hobby gardens since the beginning of 1990's [Ferencz 2015]. Since 2007 the EU has also paid particular attention to earnings derived from the goods and services produced for own consumption in its publications (SILC, Statistics on Income and Living Conditions). Based on the data, 4.9% of households produce food for their own consumption, which amounts to 0.25% of their total income [Paats, Tiit 2010]. Only recently do young garden owners realize the opportunities of the garden and they need to have knowledge and information to cultivate it. This change in attitudes is well demonstrated by a new program which stimulates local production and sale in inner settlement gardens. SPIN (Small Plot INTensive) farming was developed by a Canadian farmer named Wally Satzewich. Some of its concepts include a multi locational farm land base, 1-2-3 land allocation, high road/low road harvesting, high-value crops, structured work flow and work rate. Traditionally, there are three main barriers to entering the farming profession: land, capital and education (knowledge). As to the first barrier, which is land, today we estimate about 200,000 hectares of gardens in the inner settlements of Hungary which is regarded as the "national gold reserves of the agriculture" [www.kormány.hu]. The second barrier, capital, is also almost nonexistent as spin farming requires very little financial investment (there is no outside labor or heavy machinery involved). The third barrier, which is education, is what this program aims to address. The main purpose of these gardens is to self-supply owners and, if the plot is large enough, also commercialization. It is essential to have a crop structure that adapts to the size of the garden, crop rotation, proper selection of varieties and plant associations [Salamon et al. 2011]. Small garden owners should have adequate knowledge in order to use the Smart Gardener

Landscape architecture program which helps them to form small parcels even at a garden size of 40 m² [www.agrartermelő.hu]. Should these back-yard gardens produce beyond self sufficiency, it is also essential to know through what channels the products can be sold and to what type of buyers these sales should be addressed. There are many benefits that can emerge from urban agricultural practices, such as improved overall social and emotional well-being, improved health and nutrition, increased income, employment, food security within the household, and community social life. As part of the project we have set out to collect information through surveys conducted in the region on back-yard gardening practices, land utilization, marketing and income potential and consumer willingness to purchase. The information thus obtained will help us to better gauge the needs of the local populace and to develop a network of study-gardens, testing facilities and regional consulting centers that can aid in disseminating spin-farming practice in the region.

Material and methods



Figure 1. The area of the cross-border cooperation [IPA]
 Rysunek 1. Obszar współpracy międzygranicznej [IPA]
 Source/Źródło: [http://hu-srb-ipa.com]

Part of the research was carried in cooperation with the Institute of Field and Vegetable Crops in Novi Sad in the frame of a Mutual Hungary-Serbia Cross Border IPA cooperation. The main purpose of the cooperation is to work out a model for inner settlement garden production which helps to optimize self-sufficiency and can provide a supplementary income for families. One of the elements of this research was a rural development survey completed on both sides with 200 questionnaires each. On the Hungarian side Tiszakécske, Fülöpháza and Borota were included in the sample. The survey conducted within the program was then supplemented with additional interviews on the Hungarian and Serbian side aimed at gauging customer willingness to purchase back-yard (especially bio) produce. Sampling was random and therefore it is not representative in any way.

The territory on both side of the border (Fig. 1) is characterized by a high percentage of unemployment (Vojvodina about 24%, Dél-Alföld about 10%) and those living on welfare of which a significant

number lives in rural areas. Bács-Kiskun is the most rural county in Hungary, followed by Csongrád. Poverty in rural regions is twice of that in urban areas (Serbia: 9.8%: 4.3%). High unemployment in the region is paired with low educational level. Additional negative trends are that small farms are disappearing as owners lease their land to large commercial producers, and that due to migration (well above country average for the region) the rural areas are slowly becoming deserted. Elderly households possess an average of 500-1000 m² excellent quality land which is either not cultivated or is used only for their own needs (about 75% of land). Although, there are large amounts of uncultivated, high quality lands available utilization of these backyards is very low efficiency. One of the limiting factors is a still unregulated market and the presence of a large number of retailers who often “dictate” an extremely low price. Producers thus regularly realize losses and are not motivated financially to spend extra effort and resources on agricultural production.

Spin farming

In the first part of the research we examined how widespread this type of production is today, the size of the gardens and the main crops produced. 83.5% of the surveyed households have their own garden in Hungary while this ratio in Serbia is 100%. The rate is higher on the Serbian side because multinational retail chains are not yet present to such an extent as in Hungary thus traditional retail and markets have a larger role. In addition, since unemployment is significantly higher in Serbia and due to the ownership structure and differences in the social system, agricultural production has a more significant role in self-employment. The average size of the gardens around the house is bigger in Serbia than in Hungary, 854 m² and 730 m² respectively (Fig. 2). Since a significant portion of fruit and vegetable demand of an average four-person family can be provided by a 200-400 m² garden, depending on the method of cultivation and skill [Ferencz 2015], both countries have substantial potential in direct home production. In most of the gardens a mixture of vegetables and fruits or only vegetables are grown (Fig. 3). On the Serbian side, however, gardens where only fruits are produced are rare and the use of ornamental plants is also not typical. The difference is most likely due to the size of the plots, as in a separate survey, we have found that parcels under 300 m² are usually covered by lawn and perennial ornamental plants while for larger areas a front garden with flowers and a back garden with fruits and vegetables is more usual.

We also wanted to see what portion of the crops produced in the gardens is used by the families themselves and how much of it is sold on the market. On the Serbian side 18.5% of the respondents sell their surplus while in Hungary this is only 13%. We tried to find out whether the produce that is grown in the gardens is sufficient for the family. 59.5% of the Serbian and 30.5% of the Hungarian respondents thought so. To further gauge the level of self sufficiency we also asked about shopping practices. Only 2% of the respondents do not buy at local markets at all, the rest of them use their gardens to compensate family needs. In the questionnaires, which were filled in Bács-Kiskun County, we also asked the respondents to estimate the portion of monthly income that comes from the sale of these products (Tab. 1).

The data showed that this rate is about 10% on average (respondents who produce only for sale were also included). The way of how products reach the market also varied. In most cases products were sold both at the market and at the house and to a lesser extent retailers bought up the excess.

An important question was related to the method of production. In our

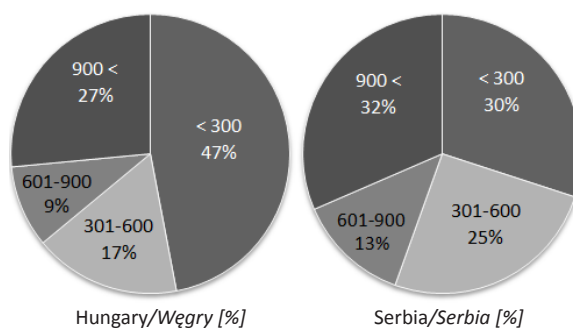


Figure 2. Garden sizes [m²]

Rysunek 2. Powierzchnia ogrodów przydomowych [m²]

Source: own data

Źródło: dane własne

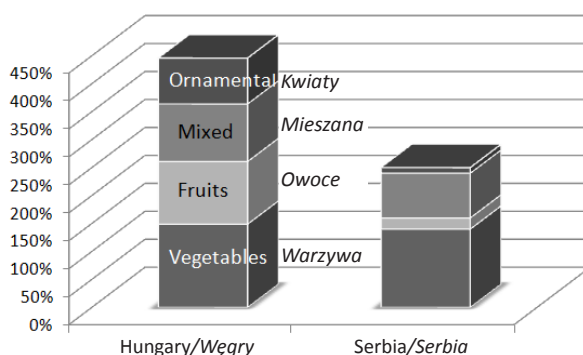


Figure 3. Production structure

Rysunek 3. Struktura produkcji

Source: own data

Źródło: dane własne

Table 1. Commercialization

Tabela 1. Sprzedaż

Specification/Wyszczególnienie	Udział/Share [%]
% of family income derived from these gardens/Udział dochodów uzyskiwanych ze sprzedaży produktów z ogrodów przydomowych	10,0
How products reach the market/Jak produkty są sprzedawane:	
– both at the market and at the house/na rynku i bezpośrednio z domu	62,5
– only at the house/bepośrednio z domu	25,0
– retailers buy up the excess/detalści kupują z domu i sprzedają w swoich sklepach	12,5

Source: own data

Źródło: dane własne

analysis we only considered fertilizers and pesticides. We found that these chemicals are widespread in both countries as in Serbia 66% and in Hungary 32% of the respondents use them. The overall use of pesticides and fertilizers also means that these products cannot be considered organic. Therefore, their use must be controlled and for the sake of food safety a random sampling is needed. We asked people if they know about laboratory soil testing. The answer is a good indicator whether the owners of the gardens apply fertilizers properly. The Serbian respondents have almost three times as many soil testing done as their Hungarian counterparts (93% of them makes use of this service).

We also took a look at the practice of animal husbandry around the house. In Hungary 45% of respondents are engaged in this activity. In Serbia this ratio is greater, 61%. In both countries, poultry represents the highest rate among animals. They are popular since they provide both meat and egg and need a relatively small space and investment. Swine and cattle husbandry declined considerably in small gardens in recent decades. Those farmers who have 800-1600 m² of land also keep pigs and cattle, although cattle are mostly kept for milk and not for meat production. The proportion of cattle on the Serbian side is slightly higher (10%) than in Hungary (7%). Due to tradition, more people are engaged in goat and sheep farming in Serbia. On the other hand, in Hungary beekeeping has a long tradition (we have also met beekeeper families in our survey). The country is among the EU's largest honey producers, and small family farms play an important role in this. If self-sufficiency is the purpose of animal keeping, the main motivation is not profitability but the production of good quality meat, milk and egg. However, if the owner does not have sufficient land to produce feed, they will most likely quit animal husbandry due to high feed prices.

It is also of interest whether respondents (especially young people) consider the propagation and dissemination of this type of garden culture important. In both countries, responses indicate that there is a need for this activity. 99% of respondents in Hungary and 96% in Serbia think so. On the Serbian side older respondents recommended that local producers should only be introduced to modern production methods, specifically the organic or ecological farming [Vlahović 2013]. When we examined the involvement of family members in gardening we found that in Serbia

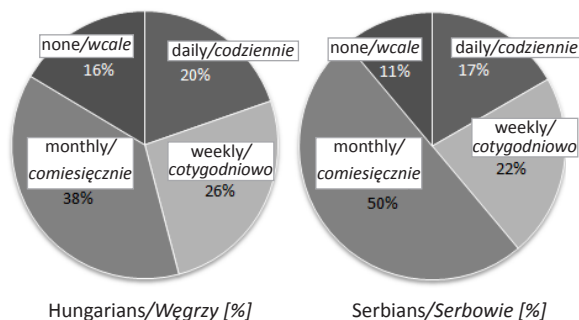


Figure 4. Bio-product consumption
Rysunek 4. Spożycie żywności ekologicznej
Source: own elaboration based on [Borgyoski, Baglyas 2016]
Źródło: badania własne na podstawie [Borgyoski, Baglyas 2016]

70% of the respondents take part in family gardening while in Hungary only 58%. Related to the previous question we asked whether young family members are interested in horticulture management and animal husbandry. The Hungarian results are more encouraging. Although only 73 people responded 'yes' (37%), it is still much higher than that in Serbia (11%). Older people were quite worried that the young generation will not take over the knowledge from them as farming, gardening is not attractive to them and typically they do not want to make a living in agriculture.

Customer demand side

Produce grown around the house can be marketed both in its raw or processed form (preserves, cheese etc.). The main selling points could be healthier, better quality foods (bio), environmental consciousness (sustainable production, short supply chains) or patriotic sentiments (local or national). If the producer decides to sell the surplus, market studies show that the main points buyers look at in homegrown/handmade products are price, better quality and Hungarian or local origin [Dogi et al. 2014]. Consumers usually purchase such products from three main areas: the farmer's market, local fairs and directly from producers. The same study has also found that there is a demand to mark the origin of artisan foods which indicates a certain insecurity as to the quality and safety of these products from the customer side. It is important to point out however that both our studies and prior studies conducted in Hungary showed that on the one hand only around one third of the consumers purchase such products regularly (i.e. more than once a month) and secondly they are only willing to pay around 10-25% extra for these products [Dogi et al. 2014]. In a survey, we conducted at a local fair in Kecskemét, sellers commented that even though there is interest amongst fair goers in their products, especially for higher quality and Hungarian products, they usually find the prices too high [Ferencz, Deák 2016]. Farmers and craftsmen selling at these fairs inherently come across mainly with conscious customers who when choosing a product do take into account the place of origin, so this result might not fully reflect the thinking of the Hungarian population at large. At the same time, fair goers expressed concerns as to the safety of the products (uncertain origin, conditions of processing and storage of products). For bio- and eco-products specifically, we have found that Hungarians consume these products more frequently than Serbs (Fig. 4). Serbians, however, mostly eat their own produce (50%) while Hungarians, in addition to own production (42%) also obtain a large portion from farmers markets (45%). Perhaps not surprisingly, those that live in the countryside and have gardens consume the most own-produce (71%) while city garden owners a lot less (46%) [Borgyoski, Baglyas 2016]. As to what type of bio-products they are likely to buy, there were no major differences, except that Hungarians prefer more vegetables and dairy, while Serbians favor fruits. These findings are also confirmed by the first part of our study.

Conclusions

Inner settlement gardens are common on both sides of the border; however there are significant regional differences. In Hungary, in the last couple of decades, old fashioned hobby-gardens have been slowly disappearing. Respondents strongly feel that it would be crucial to transmit this knowledge to younger generations. This is particularly true for practical organic farming. Study gardens of agricultural and horticultural education institutions in the region could be linked to the education system to be developed. This is becoming more important since people (especially the younger generation) are becoming more health and environmentally conscientious and there is also a growing market for traditional, local Hungarian products.

Our results show that the average size of the gardens more than allows production of fruit and vegetable for self-sufficiency and that there is sufficient unused capacity. The overall objective of the project is to help the unemployed and low-income people living in houses with backyards in rural settlements in the cross-border area to establish or upgrade their backyard farms to be more productive and cost-effective. Producers could also possibly provide goods for catering, hospital-

ity and tourism. The issue we see in regards to using such programs beyond self sufficiency is on the consumer side, where even though there is a growing interest; there is also mistrust (safety and consistent quality concerns) and lack of purchasing power. Local production does not automatically mean higher quality goods. Food safety and testing are important issues because of the widespread use of fertilizers and pesticides. Regional laboratories could be set up to monitor these products continuously. Testing could also help branding these types of products (using trademarks or certificates), thus boosting the sense of safety amongst customers.

In connection with the services and products originating from spin-farming short supply chains could be developed that could be included in local development programs. As a result, living conditions and economic situation could substantially improve and long-time unemployed people could again feel a useful part of the community and have a better chance to get back to the labor market. Although, this is a small-scale rural development program it can have a strong multiplier effect in the region as small farming and gardening businesses could potentially form the basis of growth and development economically and within the local community.

We believe that in the future we should extend this research to other closely related areas such as a range of homemade, hand-crafted products with high added value. Here the subjects of research could be the conditions of manufacturing, food safety issues, marketing opportunities and profitability issues on both sides of the border.

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Streszczenie

Celem artykułu jest próba oceny możliwości i roli ogrodów przydomowych w zaspokajaniu potrzeb ich właścicieli i możliwości potencjalnej komercjalizacji. Badanie przeprowadzono jako analizę porównawczą dla wybranych terenów Węgier i Serbii. Stwierdzono, że uprawa ogrodów przydomowych może znacząco zaspokajając potrzeby domowników na owoce i warzywa oraz być dobrym źródłem generowania dodatkowych dochodów.

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