



**HUNGARIAN UNIVERSITY OF AGRICULTURE
AND LIFE SCIENCES**

**THE POTENCIONAL OF GARDEN-PLOTS' SOCIAL
FARM FUNCTIONS
IN ENVIRONMENTAL EDUCATION**

PhD thesis

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1. BACKGROUND AND OBJECTIVES OF THE WORK

As society is unable to keep up with the world's rapid technological progress, social innovation is becoming increasingly important. Developing an environmental approach and harnessing the stress-relieving power of nature are key. Children adapt easily to new attitudes, so environmental education is key, and social farms can play an effective role in this. Such farms can be set up in certain agro-farming spaces, where recreational and educational activities can be targeted. Small-plot, manual labour dependent technology is ideal for this, providing opportunities for community areas and sensory reinforcement.

In Western Europe, social farms are agricultural-oriented, while in Hungary they are mainly non-profit organisations with a social and health profile operates in this sector. The development of an agro-focused system in Hungary requires farmers and areas that are suitable for this function. The garden-plot is an ideal solution because of its favourable location and potential for use. The aim of the research is to develop a sustainable system that will help to regenerate the agricultural society and contribute to rural development by making farming a more attractive career.

It is a type of alternative farming that does not compete with mass-producer farms, but is complementary to the main trend, promoting environmental awareness, preserving the genetic diversity of crops, providing habitats for wild species, and providing recreational and therapeutic space for specific target groups. It can also increase children's interest in agriculture, while ensuring sustainable food production. This form of farming can be particularly crucial in areas where traditional mass-producing farming is not feasible.

The system of domestic social farms is immature, serving mainly health and social purposes. The lack of legislation and a lack of focus on agriculture are barriers to expansion. Currently, children, who could be one of the main target groups of social farms, are less at the centre of the system. Their involvement could facilitate the spread of agro-oriented social farms, because the sensitisation process is easier in case of them.

The reorganisation of school gardens is not a clear success, as existing school gardens are often limited in capacity and cannot cope with the demand. Environmental education is important for the development of the 4-18 age group. Therefore, school gardens should be promoted, but nature-based, experiential environmental education is not yet adequately achieved in the current education system. The addition of a social farm function to garden-plots could be an appropriate response to this gap, as it could provide recreational and educational opportunities for children, while contributing to the social recognition of agriculture. The creation and promotion of this type of farm would be important for sustainable rural development and agricultural regeneration.

2. OBJECTIVES AND RESEARCH HYPOTHESES

The main goal of the research is to show, through a concrete model farm, the parallels between garden-plots and social farms and how these systems can contribute to the implementation of a sustainable agriculture. It also aims to demonstrate, to explore the contribution of this model to sustainable agriculture and children's environmental education. The focus of the study is on children's natural education, which can increase concentration, mental health and satisfaction using Kaplan's theory of attention restoration, Wilson's theory of biophilia and Csíkszentmihályi's theory of flow.

The goal of the research was to demonstrate, through preliminary grounding studies, that based on a secondary processing of available data:

The research uses secondary data to show that:

1. Technological progress is faster than society is adapting.
2. Farmers are forced to increase efficiency or find alternative methods.
3. Some sections of the agrarian society are threatened by agrarian deprivation.
4. Technological change requires ideological and economic innovation.
5. The agricultural sector is ageing and there is a shortage of replacement.
6. Children's environmental education is being marginalised in education.
7. The school garden programme alone is not enough to shape environmental attitudes.
8. The social farm system could provide a solution.
9. In Hungary, the development of social farms faces obstacles.
10. Garden-plots could be suitable for social farm functions.

Research objectives:

O1 The development of a scientifically based "teaching garden" and the corresponding delimitation of spaces in a garden-plot economy for economic purposes.

O2 Demonstrate that some social farm functions can be installed in garden-plots.

O3 To assess children's plant knowledge skills in natural environments.

O4 To help children learn about the environment and to assess their interest in agriculture.

O5 To show that there is no correlation between the type of settlement and the gender of children and their plant identification performance at primary school age.

If these research objectives led to the formulation of hypotheses, for which the pilot project that preceded the current work helped to formulate the appropriate hypotheses (Table 1). Due to the results of the preliminary research work, hypothesis H3 was formulated with a negative bias, which was not the case in the previous study.

Hypotheses:

H1 The social farm function can be fulfilled or replaced by a peasant farm in a gated community.

H2 The level of general greyhound knowledge and plant recognition is poor among children.

H3 The gender of children and the type of settlement where they live have no significant effect on plant identification test scores at primary school age.

H4 Children's plant knowledge is better than average for plants that are fashionable, popular and therefore regularly available in supermarkets (e.g. lavender, strawberries, green onions).

H5 The decline of traditional garden functions in public awareness is clearly documented by children's drawing.

3. METHODOLOGY

The research was launched in 2021, four years after the start of doctoral studies. The main research was with secondary data and synthesis work underpinned to explore the relevance of the topic, the rationale for the choice of location and to justify research methods. The results of the research have been previously published in the scientific publications identified in the thesis booklet.

The goal of the pilot and main research was to investigate whether environmental education can be integrated as a social farm activity in a farmer's garden-plot with primary school groups, without the involvement of external funding, and whether the children's environmental knowledge can be measured in this setting.

In addition, the research investigated the feasibility of the social farm functions of the enclosure garden, taking into account pedagogical and agricultural aspects. The validation of the pedagogical elements was supported by two teachers who also participated in the observation of the groups.

The research was geographically limited to one district, as the financial resources needed for a national extension were not available. A complex development index study and statistical analysis of the Monor district proved that the results could be applied to other districts and higher levels of the district, as the population included all relevant types of settlement. The study analysed demographic, economic and infrastructural indicators, with descriptive and higher level methods.

A questionnaire survey was answered by 527 children, representing 8.79% of the district's students in grades 1-8. Questions were asked on demographics, attitudes towards farming, and plant and tool recognition. Additionally complex development index calculation, cross tabulation analysis and binomial logistic regression were used.

The base formula for binomial logistic regression is the following:

$$odds_x = \frac{P_x}{1 - P_x}$$

The base formula for the complex development index is the following:

$$kfm = \sum \frac{x_i - x_{\min}}{T_x}$$

Table 1: Core indicators for the complex development index

Indicators	Units of measurement
Demographical indicators	
1.1 Urban/rural index (population density)	capita/km ²
1.2 Ageing index	%
1.3 Dependency ratio	%
1.4 Natural reproduction indicator (thousandths)	‰
1.5 Migration balance	%
Economic indicators	
2.1 Income included in the annual consolidated PIT tax base per permanent resident	Ft
2.2 Proportion of high and low income earners	%
2.3 Unemployment rate	%
2.4 Number of jobseekers registered over 180 days as a percentage of all jobseekers	%
Infrastructural indicators	
3.1 Population per 100 dwellings (resident population)	capita
3.2 Utility scissors	%
3.3 Number of cars per 1000 permanent residents	pcs
3.4 Number of internet subscriptions per 1000 permanent residents	pcs

(Source: Own editing based on CSO data, 2022)

The sessions included multi-sensory plant identification, seasonal agricultural activities and playful plant learning activities.

Drawing activities also included more than 200 children drawing pictures on the theme "my dream garden" or "what plant would you plant". Some of the drawings indicated psychological problems, so they were excluded for research ethical reasons and were not used for research purposes. The pictures were evaluated only in terms of plant knowledge and garden attachment and nature knowledge.

During the sessions, teachers observed children's participation, group dynamics and their attitudes towards social farm activities.

Teachers who participated in any way in the research were interviewed in-depth about the attitudes, so that more comprehensive conclusions could be drawn from the responses of 22 individuals. In addition, the views of 5 main farmers were collected on the subject.

4. RESULTS

4.1 Results from synthesis work and previously published results

In literature review, which based on my own articles are registered in MTMT and published papers, I have made several observations to support the direction and rationale of the research.

These are:

There are marked differences in the development of rural areas both in our country and in the EU. The classical instruments are not suitable to solve these problems, therefore innovative development strategies and renewal based on endogenous resources are needed. Accordingly, the environmental education and agricultural orientation of young people is of paramount importance if we are to achieve sound and sustainable development.

In terms of training and skills, the agricultural society in our country is lagging far behind, with insufficient numbers of professionals with both secondary and tertiary education (Table 2).

2. Table 2: Number of farm managers by education

(capita thousand)				
Education level	14-39	40-64	65-	Sum
No education	1,6	10,8	7,5	19,89
Practical	7,5	64,8	51,5	123,786
Elementary	3,3	15,4	6,8	25,506
Secondary	6,8	26,7	10,1	43,524
Tercier	3,7	11,2	6,1	21,06

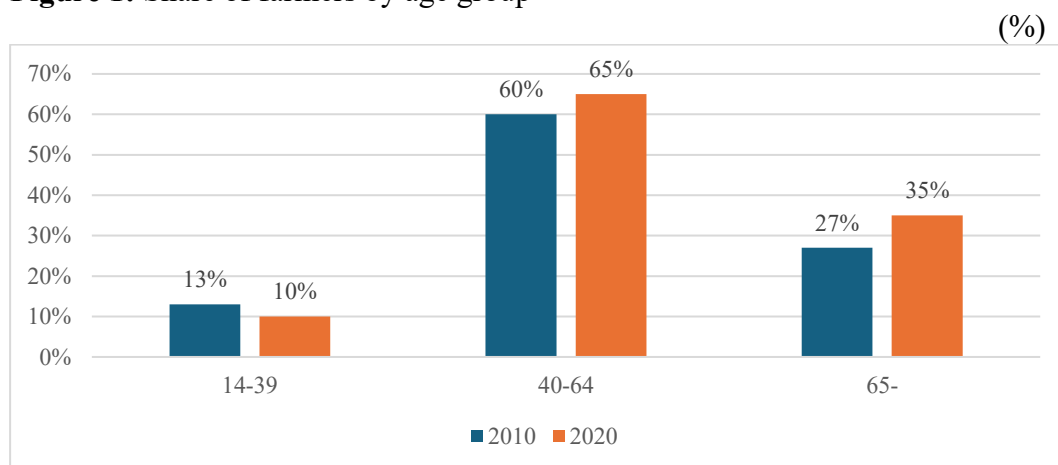
(Source: Own editing based on CSO data, 2022)

The development of IT technology and its integration into the agricultural sector makes it increasingly urgent to remedy this situation. In addition, a significant proportion of farmers have outdated knowledge and operate their farms based on technologies that were considered modern in the '80s of the last century.

The age structure is also poor, with an ageing farming population and a lack of replacement. In addition to the shortage of staff, this situation means that a layer of farmers who are not familiar with the use of IT tools is "stuck" in farming, which also hinders the development of Agriculture 4.0. In 2020, the total number of people aged 65 and over in the workforce was 1.89% in Hungary, while in

agriculture, the share of agricultural managers of the same age was 35%, i.e. 18.5 times higher (Figure 1).

Figure 1: Share of farmers by age group

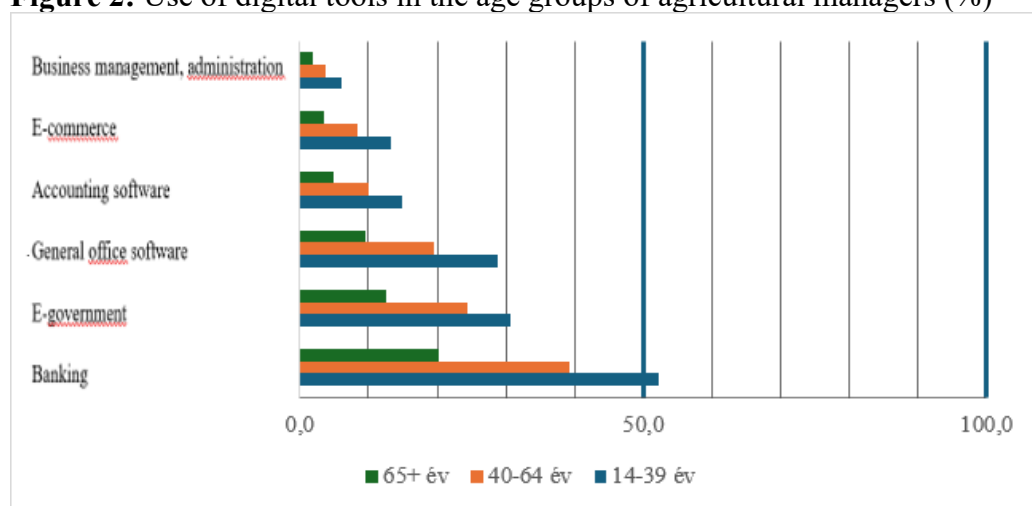


(Source: Own editing based on CSO data, 2022)

The number and educational quality of young people in the agricultural sector is currently insufficient, and for young people's do not make agriculture an unattractive career. This may be due to low wages, working hours requiring continuous, sometimes 24-hour presence (e.g. dairy farms), and often outdated technology and a degraded, outdated working environment.

In general, the digital competences of the majority of agricultural entrepreneurs are very poor, as they hardly use even basic digital tools in their daily life (Figure 2).

Figure 2: Use of digital tools in the age groups of agricultural managers (%)



(Source: Own editing based on CSO data, 2022)

In addition to identifying the critical points for agricultural society, it is also necessary to set sectoral targets for agriculture in certain segments of the sub-societal social innovation.

While the developed world is entering the new agricultural revolution and achieving unprecedented efficiency, in our country over 2/3 of farmers have not or only partially reached the 3.0 agricultural achievements for various reasons, and the technological gap is widening. The vast majority of farmers are thus deprived of advanced technology for various reasons, this called agricultural deprivation. The majority of Hungarian farmers, especially smaller farm sizes, are unable to keep pace with the exponentially increasing technological progress. This is the cause of agricultural deprivation.

Causes of agricultural deprivation:

- constrained farm size,
- significantly outdated technology,
- lack of capital,
- low production volume,
- low level of management/employee skills,
- lack of information/knowledge,
- lack of education/learning..

The consequences of agricultural deprivation are:

- increasing technological disadvantage,
- decreasing efficiency,
- below-average product quality,
- permanent marginalisation,
- business closure.

Alternative ways to solve the problem must be found. This includes orienting young people towards agrarian careers. It is necessary because they are more open to adopt technological advance. The other way is empowering marginalised farmers with alternative ways that can act as additional sources of income.

In this area, environmental protection, maintenance of the environment and the ability to adapt to environmental change, and hence environmental education for children, represent a broad range of issues which, in the long term, will allow the emergence of organisations specialising in environmental services and open up scope for alternative farming. It focuses on biodiversity, the cultivation of traditional and rare plants, gene conservation and the importance of environmental recreation and education services.

For the 4-18 age group, nature-based education, environmental education and experiential knowledge transfer services beyond the traditional classroom setting

are not adequately achieved in the current education system. To this shortage can be found adequate answers in the scope of the school garden, the social farm, the family farm, which takes on the functions of a social farm but does not yet operate in this way, and the peasant farm. However, the lack of child-centred farm spaces that provide the missing knowledge, community experience and recreation is striking. These needs could be satisfied in part or in whole by a single garden-plot or family farm where active farming takes place.

Community spaces and activities that can provide rural communities with traditional village life, practical and lovable community experiences, are key to preventing the disintegration of local communities and maintaining coherence. This can be based on the intergenerational basis of traditional garden-plots and family farms, which are not only suitable for replacing social farms, but are also intrinsically linked to this function, and even viscerally linked to it, since these farms, often heritaged from father to son, are preserving the traditions and values of the past, and trying to meet the challenges of the future, and are therefore also suitable for children's environmental education.

In view of the fact that the development of a mutually accepted, well-defined and delimited conceptual structure is an indispensable prerequisite for demanding, thorough and internationally evaluated scientific work, this study also seeks to define the most basic directions for conceptual standardisation in the case of social farms, based on the definitions of the international scientific literature. On this basis, the social farm in this research can be classified as a subcategory of the green care farm structure. In addition to its educational and employment function, it also performs a high level of agricultural activity, and its productive activity is therefore capable of going beyond the level of ancillary social services.

The two main elements of social farm management are the same everywhere. The activities taken place on farms or in horticulture and the provide occasional and permanent opportunities for education, recreation, work and rehabilitation for people with special needs.

In Hungary, a kind of dichotomy can be observed in the 200 000 hectares of garden-plots. Small parcels of land are a characteristic feature of the Hungarian landscape and are of great value in terms of both cultural heritage and genetic diversity. The important role of diversified activities on small farms in the sustainable management of agricultural landscapes has been highlighted by European research. Steps must be taken to preserve the landscape value, cultural history and genetic conservation role of the garden-plots that are a specific feature of the Hungarian countryside.

Research has shown that garden-plots are special farming spaces that can be used to provide environmental education for children in a social farm setting, because:

- small plot sizes mean that large farmers cannot exploit these areas, so competition for land is limited.
- At present, the agricultural function of these areas is decreasing, but the concept of food sovereignty could reinforce their active agricultural use.
- Because of their function, garden-plots have historically been places of self-sufficiency, of exchange and sharing of surplus production, so that by supporting the traditional function, purposeful farming can take place in places where the knowledge base is given and can be shared, where activities exist at the level of tradition and are instinctive.

All in all, children's environmental education can be organised in garden-plots that are currently under agricultural use. It is undeniable that allotments have significant food production potential and can be incorporated into community food distribution systems, which also helps to maintain social farm-like public services.

It can therefore be said that all these aspects make up a social, territorial and societal formation that has always been deeply embedded in the fabric of society, deeply rooted in tradition, and which has been and still is a means of social survival, of daily subsistence and of intergenerational knowledge transfer over the centuries. And these facts demonstrate, historically and in terms of social practice, that garden-plots are sufficiently resilient, diversified and socially embedded to be extended, higher-level arenas for children's environmental education.

Mónika Réti, in her book *Outside-Inside is Good School*, says: "Every pedagogical process takes place in some kind of physical space. Yet pedagogy in general unfairly overlooks this inevitable part of learning. In studying pedagogical theories, one is apt to get the feeling that the physical environment is a secondary or even inferior factor in the pedagogical process." This idea highlights the problem that in the education of children in Hungary, the physical space and its effects and the interaction with it are neglected in practice. The biophilia hypothesis, stress reduction and attention recovery theory, as well as flow experience, all of which have been cited and referred to in detail in the exploration of the theoretical basis of social farms. With these citations provide detailed and scientifically stable evidence of the comprehensive and intensive effects that the environment can have on people in general, and that this is even more intense in the case of children who are open, thirsty and receptive to new knowledge. The positive effects of this on recreation, learning and health have also been extensively explored by the scientific world.

The use of open spaces by school-age children (as understood for school gardens) and the design of school gardens are increasingly based on child-friendly design principles that are in line with needs. School gardens are primarily places for learning and environmental education. School gardens should serve education and

training as an integral part of the school, and their importance is enhanced by the fact that they can be used to enhance the development of pupils' social and cognitive skills. For many children, this environment is the one of the few places where they can come into direct contact with their own generation in an open space and in nature.

These spaces are also suitable for developing children's responsibility and cooperation skills. School gardens and community spaces with a similar function can also have a positive impact on children's behaviour, attitudes and attitudes to the world. In many cases, the school garden is the only tangible of natural places for children, and is therefore currently the exclusive venue for environmental education. In addition, teachers, often free of charge and as social workers, carry out environmental education work and spread a love of nature among children. It would therefore be extremely important for school gardens and the teachers who maintain them to receive external support as part of a social farm service. The garden-plots mentioned in this research could play an important role, because school gardens alone cannot provide a fully satisfactory service in terms of education, employment and environmental education for pupils.

So, through synthesis work, I have found that there are many processes taking place in the world which, on the one hand, limit children's natural, instinctive interactions with the environment and, on the other hand, marginalise the importance of agricultural, nature and environmental work and activities. This is one of the reasons why environmental education for children has become a priority, as it is through the tools related to this theme that children can best be encouraged to:

- - live environmentally responsible life,
- - protect nature with their own means,
- - should be able to value the work done towards environmental sustainability,
- - consider the elements of environmental sustainability as a financial asset,
- - understand and monetise the added value of healthy and sustainable, eco and organic products,
- - take action for environmental sustainability themselves and, in some cases, feel attracted to the agricultural sector.

In contrast, a number of processes can be detected that limit or cancel steps taken in this direction. Therefore, it is of most importance that new systems and institutions supporting environmental education, which have not been applied or have been applied only to a limited extent in Hungary, are integrated into agriculture, which, as border areas of the sector, help to educate younger generations about the environment, to develop environmental attachment and, not least, to arouse interest in the sector in the hope of career orientation. This is also

the aim of the social farm, which is the basis of the research, and the activities that are being set up there.

Technological development and technological innovation in the world is evolving rapidly on an approximately exponential trajectory. In contrast, social innovation is moving along an approximately linear path. Consequently, the gap between technological development and the overall development of society is widening and, partly as a result, the overall level of stress in society is increasing, while the number of natural environmental interactions with daily life is decreasing significantly in relation to the number of contacts that are made with the environment. This process also has a direct impact on agriculture. The farming community is ageing, young people are not wishing to enter farming careers, but even interest in the rural development field is declining. Agriculture 3.0 can be briefly described by the concept of precision farming, a process that is still ongoing in Hungary, where the vast majority of farmers have not adapted to the challenges of the 3rd agricultural revolution. Nevertheless, agriculture 4.0, which in simple terms is a system of smart farming, has already started, and 5.0 systems based on robotisation, big data and artificial intelligence are being developed and piloted in more developed countries.

This clearly shows the need for social progress and, at the same time, the need to reduce the stresses of rapid development, but young people do not have the social support they need, so they are 'sucked' into the digital space and their interaction with the environment is even more limited. As a consequence of the rapid pace of technological development, more and more people are being disconnected from the 'cutting edge' technology and there is an increasingly insurmountable barrier to catching up. This may make it worthwhile to develop a system that supports children's environmental education and young people's orientation towards agricultural careers. As can be seen in summary, the situation of the social problems of agriculture and the system of environmental education is a complex set of problems, which would require a number of coordinated interventions. In the context of the present work, it is not feasible to develop a comprehensive system covering all the details. It is, however, realistic to undertake a substantial research effort to strengthen one of the - if not the first - input points of the process by means of novel ways. If this is successful, it will be possible to support children's environmental education and the strengthening of their agricultural orientation with innovative methods and ways.

4.2 Results of the primary research

4.2.1 Delimitation of the field unit

Even today, it is not possible to give a precise definition of rurality, as there are many subjective definitions. The Budapest-rural contrast, for example, simplifies

the idea that everything that is not in the capital is rural and disadvantaged. The Monor district is in a special situation, as it is located next to the agglomeration of Budapest, but it is a mosaic of districts, with disadvantaged areas at the municipal level. There are disadvantaged, developed and developing settlements in the district. There is a rapidly developing town (Gyömrő), disadvantaged farmland areas, and particularly backward areas (Felsőfarkasd, Tetepusztá), which are separated from the core of the settlement, as well as an alternative ecological community. In addition, there are also settlements of former servants' dwellings, i.e. 'puszta' settlements. For the disadvantaged rural units rural sociological method have been used. In these areas, agricultural activity is predominant and there are 'commuter' workers and unemployed people living there for low social status work. Farmland areas are typical in Monor and Vasad. The most of non-cultivated areas are in Nyáregyháza, where utilities and roads are limited. There is a long history of spatial development in Hungary and local statistics and the Complex Development Index help to measure the development of rural areas more accurately. The concept of rural areas is shaped not only by geography but also by social and economic parameters. The Monor district is a rapidly developing area close to the capital, but it also shows different levels of development, reflecting the economic situation of the settlements. The district's transport links, such as the M4 motorway and the Budapest-Cegléd-Szolnok railway line, have a direct impact on population proportions and density. In addition, the agglomeration effect also influences the population distribution of the district, as a "crescent" has been formed in the south-south-east direction away from the capital, with a number of factors of disadvantage in this area, such as lower education, lower income, higher mortality, etc. Pánd is located in this crescent, for which the CDI group indicators and the baseline indicators indicate complex problems. The village is ageing, with a migration rate of -0.752% and a migration balance of -0.352%, so the village is in a demographically poor state. The economic indicators are as bad as the previous factors, with the lowest gross income, the 2nd highest unemployment rate in the district, and the worst high and low income ratio (42.8%).

The Monor district covers an area of 352.02 km², has a population of 70 247, of which 12 647 are children aged 0-14 years, and the population density of the municipalities in the district clearly shows the differences between rural and urban areas. According to EU regulations, rural settlements have a population density of less than 150 inhabitants per km², while Monor and Gyömrő are urban areas with a higher population density.

According to the district's development indicators, the level of development of the different municipalities varies, but Monorierdő has moved up the ranking by improving its infrastructure, while Pánd and Káva have lagged behind in the long term. Based on the data and the KFM indicator, the social and economic disparities of the Monor district are well observed and can be used to identify

development directions. Social and district diversity is also reflected in the development indicators of the district and in rural sociological analyses, which makes it possible to apply the research carried out to other regions. The number of children aged 0-14 years living in the district was 12 647 in 2022, according to the data of the National Statistical Office. With the sample of 527 persons recruited, 4.1% of the children in the district were surveyed. My sample is thus representative for the district, and the sample is also representative for gender and age distribution.

4.2.2 Delimitation and design of the training site

The group sessions took place on the author's private property in Monor, which grows vegetables, fruit and herbs on 3400 m², as well as grapes and wine. The 11 species of herbs, 25 vegetables and 18 species of fruit grown here provide diversified farming. The plants provide a continuous opportunity for children's environmental education from spring to autumn. The crops can be used for seasonal consumption, storage or preservation, and the farm promotes sustainability and an ecological approach. Fallow fields, bee-keeping and lawns increase environmental awareness.

The structure of the farm is designed so that the educational spaces are close together, transparent and support children's observation. The teaching and gardening spaces are located on the south side of the property, while the orchard is further away on the north side, so as not to interfere with parallel activities. The path to the orchard and the occupational spaces are grassed to provide a good separation between activities. The gardening areas are divided into small plots where students can interact directly with the plants and touch, smell and taste them. Several mobile tables and benches are available in the area and can ideally accommodate 30 people up to a maximum of 40.

On the farm, plants can be planted and consumed seasonally. The sustainability is a goal too. Because of it, 500 m² of facelia were planted in 2024 and the grassland under the orchard was restored. The beehive has been planted with honey plants, providing an excellent opportunity for insect observation. The farm helps to promote environmental education, helping to deepen knowledge through sensory reinforcement. Free play is also available in the orchard during rest periods, with shade provided by larger deciduous fruit trees.

Servicing facilities on the farm include a semi-enclosed terrace, summer kitchen, utility room and tool shed. The vineyard receives special attention in the autumn, as the spectacular harvest is a popular event, although capacity is limited. The herbs are planted alongside the fences, making them easily accessible for children to touch, smell and taste. Observing the plants during the period of crop production has been found to be more successful. The practical horticultural

activities showed that yields can vary due to weather anomalies and therefore there is a need for species and variety diversification.

Because of the frequent drought, irrigation is essential and mulching must be applied. Manual cultivation can cover a maximum area of 1000 m² with two adults working daily, while mechanisation can cover 1500 m². The farm is operated with two rototiller, a motorised backpack sprayer, a motorised lawn mower and a rented small tractor.

Figure 3: The property which is the place of research



1. car turning zone
2. service places, wine cellar
3. „open” classroom
4. pitfall
5. bee pasture
6. orchard
7. gardening area I.
8. vine yard
9. "amphitheater"
10. lougne
11. gardening area II.

(Source: own edit 2024)

4.2.3 Results of pilot research

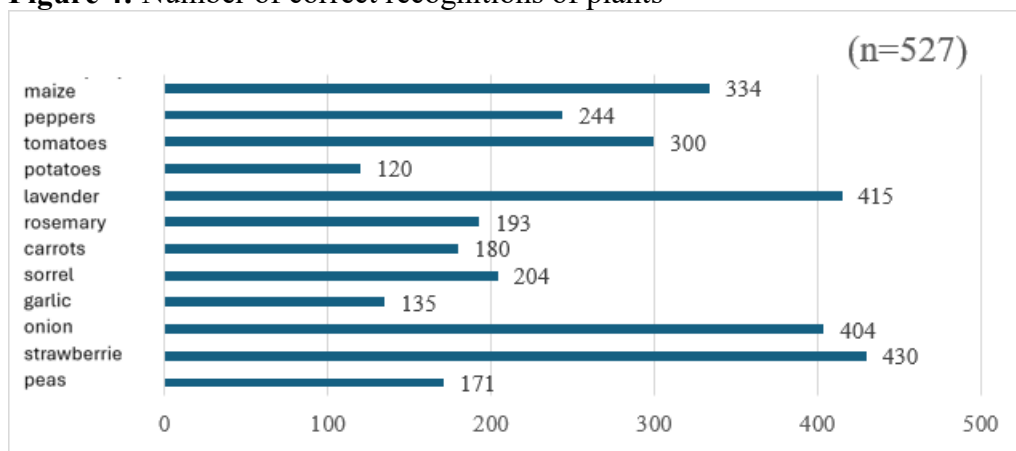
During the in-depth interviews, teachers said that schools are open to the programmes, but they would only be organised as thematic days or class trips due to financial constraints. The number of lessons in biology and technology has been reduced and the number of workshops is minimal. Funding for teachers and farmers is also important, as farmers have limited capacity and infrastructure is not always adequate. The programmes are free yet, but in the long term financial support is needed to cover the costs of teachers and farmers.

Of the 92 children surveyed, girls had a better knowledge of plants, but the percentage of correct answers was still just over 50%. The majority of respondents live in cities, but the plant knowledge of rural children was not significantly different from that of urban children. The most familiar plants included varieties found in shops, such as green peas, strawberries and peppers. Children knew the basic tools such as hoes, rakes and pitchforks, but there was a greater lack of knowledge of other equipments. During the group discussion, children expressed a general interest in gardening, but rarely mentioned practical tasks and nutrient replenishment. In terms of career orientation, most wanted managerial positions or highly skilled jobs, and only a few were interested in agricultural professions. Their knowledge of short supply chains was also minimal, but positive attitudes towards experience were evident. The preliminary results of the research suggest that the programmes could be useful but need further fine-tuning. The children's plant recognition improved, but the method should be applied differently in the future, as group collaboration had an impact on the results. As the research continues, questions and tasks can be refined to better fit the needs of the target group.

4.2.4 Questionnaire survey of children

One of the main goals of the research was to assess children's knowledge of plants and tools, as well as their attachment and attitudes towards the environment. This involved the completion of 527 evaluable questionnaires. A number of findings can be drawn from these. Among the plants, three achieved an outstandingly good recognition rate. These are lavender (415), strawberry (430) and onion (404). This confirmed the results of the pilot study that the recognition skill itself (i.e. competence) is assumed to be present in the children, but the level of recognition of the other plants indicates a low level of environmental knowledge and knowledge of nature.

Figure 4: Number of correct recognitions of plants



(Source: own edit, 2024)

The 30.36% and 35.48% recognition levels for rototiller and grape presses indicate a reduction in gardening and home farming activities.

Figure 5: Number of correct recognition of devices



(Source: own edit 2024)

Main findings:

- People who gardening or care for animals are 4,182 times more likely to recognize plants. In other words, gardening, plant and animal care are particularly effective in developing garden attachment at this age.
- Children in rural areas are 2,382 times more likely than urban children to recognise gardening tools.
- Children who put away preserves, vegetables and fruit for the winter are 1,956 times more likely to recognise plants.
- There is a weak but detectable difference in tool and tool recognition between genders. In plant recognition, boys are less likely to give the correct answer and

the odds in this case are 0.633 for tool recognition, the opposite is true for tool recognition and the odds for tool recognition are 1.345 for boys.

- e) The study showed that contrary to stereotypes, there is no evidence that village children are more familiar with garden plants. The odds for villagers is 0.941, which means that there is virtually no difference between urban and rural children in this respect. It also does not increase the odds of either garden attachment or plant and tool recognition if there is a person involved in agriculture in the family or circle of acquaintances, i.e. social motivation is not an influencing factor.
- f) A cross-tabulation analysis shows a weak ($V=0.169$) but statistically valid ($p=0.002$) relationship between settlement type and the score obtained. This suggests that urban students are more likely to be placed in the weaker category between 0 and 5 points (adjusted standardised residual: 3.5) and that rural students are more likely to be placed in the category between 16 and 20 points (adjusted standardised residual: 1.8), but in this case no clear conclusion can be drawn, as the value of the adjoint standardised residual is slightly below the threshold value of 2.0.
- g) A cross-tabulation test shows a weak ($V=0.175$) but statistically significant ($p=0.001$) relationship between living in a house with a garden and the score. Students living in a non-garden house are more likely to be in the weaker 0-5 score category and between 6 and 10 (adjusted standardised residual: 3.0 and 2.0 respectively) and students living in a garden house are more likely to be in the 11-15 score category (adjusted standardised residual: 2.5).
- h) By a cross-tabulation study, a weak ($V=0.224$) but statistically valid ($p=0.001$) relationship was found between the number of plants and fruits canned and otherwise preserved for winter and the score obtained. This suggests that those with a score between 11 and 15 and between 16 and 20 are more likely to be "winterised" (adjusted standardised residual: 3.2 and 2.7 respectively).

4.2.5 Results of drawing

Children's relationship with the garden was explored through their drawings. We planned to produce one hundred to one hundred drawings on the themes "The garden of my dreams" and "What vegetables and fruits would you grow?". In the first category, 126 drawings were submitted, showing a low level of children's gardening skills. Most of the pictures do not show people, nor do they depict themselves, suggesting that the garden is not seen as a personal space. Many gardens are dominated by artificial features - pools, paved areas, garden furniture - which show the decline of traditional garden functions. In some drawings, the garden is presented as an entirely built-in space full of technical equipment. The vegetation often consists of ornamental plants, fruit trees are scarce, and there are few tools or actions that suggest the cultivation of the garden. The question "What plants would you grow?" was answered by 92 children, drawing a total of 34 plant species. The most frequently drawn plants were apples (57), carrots (56), strawberries (36), tomatoes (32), peppers (31) and pears (24).

Strawberries and, somewhat surprisingly, lavender also made it into the top ten most frequently selected plants, reflecting their popularity and 'hit plant' status as revealed by the plant recognition. The citrus appearance (12 lemons, 3 oranges) shows a lack of natural history knowledge, while exotic plants (mango, pineapple, pomegranate) were also drawn. The function of the garden is mainly recreational: 61 drawings show a pool or pond, 57 a gazebo and 67 a paved area. Only 24 drawings show farm features, and a total of 30 drawings show farm implements, beds or livestock. Weather depictions are also incomplete. This is indicated by the fact that 53 drawings do not show any weather features at all, and 29 only show the sun. Overall, the children's gardens reflect the background of classical farming functions and the weaknesses of environmental education, which highlights the importance of school gardens, social farms specialised in environmental education and nature education.

4.2.6 Results of blind-test tasting

During the tasting, approximately the same plants were placed on the table at each period, cut into pieces and diced, and the children were blindfolded and allowed to eat them (of course, any allergy risk was asked). The fruits and plants consumed were pears, apples, onions, cucumbers, radishes, carrots, sorrel, lettuce and grapes. During the tasting, the children almost always recognised the vast majority of the plants with the exception of sorrel in several cases. It seems clear that people can easily recognise plants in childhood by taste experience. In the case of less consumed vegetables (sorrel, radish), the taste sensation was dominant, which was typically indicated by the children's initial grimace, but which they were then happy to taste again. It should be stressed that, according to both the session leaders and the observers, this was the session in which all the children wanted to participate and enjoyed the most. Here, the experience of success and sensory reinforcement through taste were thus decisive and inclusion of disadvantaged children was also achieved, so in the long term, this type of exercise may be worth continuing for similar types of environmental education for children. Interestingly, there was no mention of any of the plants that the children said they did not like during the tasting.

Later, when this kind of activity was over and we moved on to another task, some children indicated that they did not like one or another plant, but when asked "but all in all do you liked the taste of plant", the answer was overwhelmingly yes, i.e. the aversion to vegetables may be a kind of socialisation process and not too deeply ingrained attitude. Therefore, it seems possible to promote the cultivation and consumption of certain vegetable plants, which indirectly helps the development of garden attachment. The children were keen to see the plants they had tasted in the garden and, with the exception of radishes, we were able to show them the live plants. The tasting sessions had to be conducted in small groups (5-8 children) to could been a blind tasting experience for everyone. This session, in

addition to controlling the children's knowledge of the plants, was an excellent way to encourage a relaxed, open attitude and thus a successful session.

4.2.7 Information collected through observation

The routine of the programme was always the same. Children were tense on arrival and exhausted from walking (no more than 2 km). On arrival, they were allowed to sit down, have a snack and drink syrup and soda. During this time, they were somewhat relaxed and their attention was attracted by the numbered tools and materials prepared for demonstration. Then, after a quick brief introduction, they were told where we were and why we were here. At this point, the more open children typically interacted and tried to share their own stories, their attachment to the place, or perhaps their own similar experiences. Afterwards, the tasks were divided into groups, where, with one exception, the children were clearly engaged, enthusiastic and with a sense of balance and calm that is rarely seen in school children these days. The active attention and the happiness of interacting with the environment, rather than the hectic, almost hyperactive atmosphere of everyday life, became palpable. Throughout the programmes, the children continued to enjoy the activities. In the case of children with peripheral group status and those with a disadvantage, it was often the case that a successful experience during the session led to the inclusion of these children, and thus to their integration into an otherwise exclusionary community and their useful participation in the group. In one particular case, a particularly marginalised and isolated Roma child repeatedly said that he was "stupid for this" and tried to avoid doing the task, and then, fortunately, the first plant he tasted was sorrel, which his classmates did not recognise but he confidently said the name of the plant. Seeing this, he received a reinforcing praise and from then on he continued to participate in all the games as an equal and completed the tasks with a medium level of performance. Whatever the season and whatever the weather, the children became active, cooperative and smiling throughout the sessions. On several occasions, teachers warned in advance that the children's material they brought would be problematic, but there was no sign of this during the sessions. On one occasion, out of 527 children, 4 male children in one group had to be warned and brought into the session with a little more control. In all other cases the children were interested, open and task-oriented. At the end of the sessions, typically several children asked if they could come back either with a parent or a school group. Some children were influenced by the session to join the school biology club and some returned with their club group. We have also tried to collect feedback afterwards and with the help of the accompanying teachers this has been partly done. The children experienced the visit at such a high level that they talked about it for a day or two after returning to school, and in several cases asked in class if there would be a similar programme because they would like to take part. In other words, we clearly succeeded in providing a multiply reinforcing experience that generated interest and demand for environmental awareness programmes.

4.2.8 Collaborations developed during the project

Initially, it was more difficult to find partners for the project, and there was not much response to the first invitations. The breakthrough was the cooperation with the Ady Úti Elementary School in Monor. The school's ambition to become an eco-school was the motivating factor that gave impetus to the joint work, with environmental education of children being a priority in the school's plans. The cooperation in the research was of great help in this respect, as the school classes were able to participate in the thematic programmes in an organised environment, where, in addition to the dissemination of knowledge, environmental education and farming-related activities were also carried out. In this context, the recognition test, tasting and other programmes were suitable for achieving the research objective and the school's goals without any changes. The activities were timed to coincide with career guidance days, sustainability week and excursion days, so that they could be carried out within the planned free time and at no cost to the school or parents. As an extension of the collaboration, I registered the project site for the 2024 Sustainability Week event series, where I held sessions at the research site as an external venue. For the 2025 Sustainability Week from 7-11 April, I will now offer classes and an off-site location. Themes for the 2025 Sustainability Week include Soil and Biodiversity, Green Energy, Artificial Intelligence, Waste, Consumer Awareness, Consumer Protection and Food Production and Consumption. In three of these themes, we can offer a substantial programme of events for those interested.

The success of the cooperation and the research is demonstrated by the fact that, after initial difficulties, the project has been and continues to be of great interest at local level. In addition to school classes, camps, workshops and scout groups have also taken part in the programme offered. Cooperation has also been established with the Fáy András Reformed Primary School and Primary Art School in Gombai and the Jászai Mari Primary School in Monor, and the primary school in the municipality of Pánd is also interested in the programme.

The social farm character seems to be strengthening, as the Monor City Care Centre and one of the city primary schools would like the research site to participate in the "Intergenerational learning in environmental education for elderly and children" programme, imaginatively called "Littles and ÍGrannies". This programme was previously created in 2015 by the Magosfa Foundation for Environmental Education and Ecotourism and the associated publication has been available digitally since 2022. In Monor, activities are still active in this framework. The project will include a series of "from seed to harvest" programmes, where seeds of plants will be planted in seedling trays and then nurtured, from planting to harvesting, by children and elderly people together. In this way, the research site can provide a social public service to the local community, capturing the essence of the social farm, and at the end of this process, we will process the harvest and sell it for charity to raise funds to expand

the project, while maintaining the agricultural profile of the enclosure as a core activity. Locally, I had the opportunity to visit the school gardens in Monor at the Jászai Mari Primary School and in Gombá at the Gólyafészek Kindergarten and Mini-Caregiver Day Care Centre and to talk to the teachers in charge of the gardens. In order to countrywide contacts at national level and to learn from good practice, I was able to coordinate with the Színeskert Foundation, which maintains an exemplary school garden in Lakitelek, and to visit the school garden. The open day of the school garden took place on 24.05.2023 when we had a meeting with Ilona Szelesné Kása, the chairman of the board of trustees. After the open day, in the afternoon, I had the opportunity to hear a presentation on the good practices of the Danish education system at a conference organised by the Hungarian-Danish Cultural Association and to have a personal discussion with Torben and Ellen Bæk-Sørensen, with whose help I hope to go on a study trip to Danish social farms and school gardens in the future. The planned date for this is 2026. Overall, I have gained a nuanced experience from the collaborations, based on the data and information gathered during my research. I have been fortunate to experience on several occasions that environmental education is currently being provided - albeit in isolation - by foundations, associations and civilian voluntary work of a high quality. The people who do this are currently doing it as a mission, out of a sense of vocation or out of conviction, for free, in their spare time. On the basis of this experience, I am amending my position, previously published in the journal "TÉR-GAZDASÁG-EMBER", that school gardens are not an effective way of educating children about the environment.

On the basis of my research and experience, now I see it as a well-founded view that school gardens have limited capacity, funding and legal frameworks for effective environmental education of children. In order to achieve the full potential of environmental education, the cooperation between social farms and school gardens could optimally become a synergistic relationship, supporting each other, which could be significantly strengthened by a sustainable targeted grant scheme,

5. CONCLUSIONS AND RECOMMENDATIONS

The primary question is whether we can get farmers involved in the domestic social farm network. Before this can be done, however, it must be clarified whether the domestic adaptation of the social farm system is an objective at agricultural policy level. If one or the other of these two questions the answer is not may be justified to operate and finance the Hungarian social farm network and its support mechanisms not within the agricultural sector but rather within the social and health services sector.

It is clearly seen that the development of the current NGO-based network has stalled. And the organisations currently in operation are burdened with operational and funding problems. Small and medium-sized farms and smallholders are finding it difficult to make a living from the income from agricultural activity because of their low income-generating capacity. For them, the task linked to social farms can provide additional income as a complementary activity, which can also improve their quality of life.

It is important to emphasise that social farms are not obliged to integrate care activities carried out by therapeutic or social professionals. The employment of such professionals is possible, depending on capacity, but is by no means an expectation. Intersectoral cooperation can include the education, social and health sectors, but participation from the agricultural sector is a must. In the case of social farms, this cooperation could cover contacts, visits and mentoring of the target group as required. Forcing cooperation beyond this may reduce interest and the willingness to undertake the activity. It is easy to see that public services that have a social utility but no direct economic benefit cannot generally be maintained on a business basis. If the operating costs associated with the additional activities on social farms are not covered by continuous, normative funding, farmers will not be able to maintain these services in the long term. At the same time, social farms provide a socially useful service and can therefore legitimately claim support from the European Union, the State or local authorities.

In our country, social farms should move away from the well-intentioned but sometimes agriculturally controversial attempts of charities and NGOs. This requires the involvement of farmers - mainly farmers - for whom additional income from complementary activities is important for their livelihoods, and who, with appropriate social or educational support, are able to provide productive, manual labour for the target groups concerned, and to provide high-quality environmental education based on natural values. Agricultural professionals with the appropriate skills and training are essential. These conditions are met by family farms for smallholders and by smallholders who are involved in diversified crop and livestock production. On these farms, social farming can be developed as a new service activity that can contribute to the strengthening of the farm, while at the same time providing the farmer with a skill that has a significant marketing value to his own customers through CSR activities.

The domestic adaptation of the social farm system is feasible, but it is essential to empower small producers, to define the ecological and professional requirements, to clearly define the target groups, to provide the financial basis for sustainable operation and to set realistic conditions for entry into the system. This is the only way to ensure that this form of activity, which falls into the multifunctional category of agriculture, can take root in this country.

The demographic problems of the Hungarian farming community are getting worse: the proportion of young farmers is barely ten per cent and the figure is steadily falling. The older age group already accounts for more than 36% of the community, so the fact of ageing is unquestionable. This phenomenon needs to be addressed by direct measures. There are also problems in terms of skills, with a shortage of professionals with secondary and higher education. Although skills levels are rising among the younger generations and, if successfully rejuvenated, this will provide a good basis for major changes, ageing and a lack of digital skills are currently combined to hamper the renewal of the agricultural sector.

The digital revolution in agriculture is leading to a significant increase in production for those who participate, but many farmers are missing out and are becoming increasingly marginalised as a result. Inefficiency is leading to increasing losses for farmers who are unable to catch up.

Precision farming is an unattainable goal for most Hungarian farmers, many of whom do not even realise that they need precision technology. Meanwhile, the pace of technological progress is fast, making it increasingly costly and difficult for those lagging behind to catch up. Young generations are much more adaptable to technology and their integration into agriculture should be encouraged. Nowadays the environmental education of young people, which is also the basis for the orientation towards an agricultural career, is mainly an ad hoc "social public service" provided free of charge. However, in order to be sustainable and regular in the long term, it needs to be properly funded.

The main objectives of environmental education in the context of the implementation of environmental education in the garden-plots are to ensure nature conservation, sustainability, environmental awareness and an experiential approach. While the design of activities should take into account the educational framework of schools, research has shown that children's environmental knowledge, agricultural knowledge and attachment to gardens is low. The studies also show that their knowledge of plants is most likely to identify the "hit" plants available in hypermarkets.

With the exception of a few specific health functions, the farms run by smallholders are fully suited to the functions of social farms. They are fully capable of providing the required functions for the target group of school-age children, thus contributing to their active participation in environmental education

and to the consolidation of the knowledge acquired during their basic school education through practical activities.

I have made the following findings in testing the hypotheses:

There is evidence from practical work that the social farming function can be replaced and/or fully taken over by a single enclosure or family farm. In other words, hypothesis H1 is confirmed.

Based on the processing of the questionnaire survey, hypothesis H2 is supported, as general plant recognition and knowledge of greyhound is low among children. Hypothesis H3 is partially supported, as based on the analysis of the data collected, the overall gender and type of municipality of residence of children, as measured by binomial logistic regression, have no significant effect on plant recognition test scores at primary school age, as the vast majority of scores are in the middle class mid-range with normal distribution. However, the picture is shaded by the fact that positive extreme scores are more often achieved by rural and negative extreme scores by urban than would be expected from the cross-tabulation,

According to hypothesis H4, children's knowledge of plants is better than average for plants that are fashionable, popular and therefore regularly available in supermarkets. This was confirmed by the high recognition rates for lavender, strawberries and onions. As a complementary finding, it follows that the recognition competence of children is not poor, but the level of knowledge is low. Hypothesis H5 is also confirmed, as the children's drawing clearly documents the Furthermore, I hereby modify my position published in the journal TÉR-GAZDASÁG-EMBER 2022, Volume X, Issue 1, that school gardens are not suitable for effective environmental education of children.

Based on my research and experience, it is my current view that school gardens are limited in their capacity, funding and legal framework to provide effective environmental education for children. In order to achieve the full potential of environmental education, the cooperation between social farms and school gardens could optimally become a synergistic relationship, supporting each other, which could be significantly strengthened by a sustainable targeted grant scheme.

6. NEW SCIENTIFIC RESULTS

Based on the research carried out, it can be stated that the Hungarian social farm system is distorted compared to European models and the directions supported by legislation and EU tenders, as the Hungarian social farm network is run by associations, non-profit charitable organisations, which require and use up the normative support common in the social sector. In contrast, in international practice, social farms typically have an agricultural profile and a social function. Optimally, social farms provide recreational and ancillary therapeutic services alongside the main agricultural activity.

In Hungary, the almost 200,000 hectares of closed gardens have suffered a significant loss of function, with the result that horticultural or small-scale farming has been relegated to the background. The agricultural profile of the garden-plots has faltered, but this situation could be improved by the introduction of a social farm function in the garden-plots run by farmers. This would have a synergistic effect on the garden-plots, farmers and children.

Environmental education for children is an important element in the Hungarian education system, but educational institutions have limited means to implement and enforce this in practice. Social farms in garden-plots could fill this gap.

In practice, a training garden was also created, which, in addition to the main agricultural profile, has social farm functions and thus the research has also laid the theoretical groundwork in practice. The farm has been in operation for four years and will continue to operate after the end of the research.

The environmental education of the children has been based on a series of multi-sensory reinforcement activities which, in addition to providing recreation and therapeutic activities for the children, deepen their interest in farming and enhance their experience of the positive effects of the environment.

Four years of experience have shown that the social farm function can be installed in a garden-plot without major infrastructure investment.

It has also proven that enclosed gardens as agricultural land can enhance children's environmental education.

Children's knowledge of plants is poor, but a novel finding is that there is no significant difference in the level of competence between rural and urban children's recognition skills. However, it is generally true that children's knowledge of the environment and nature is low.

Based on the drawing research, which has not been applied in Hungary in this field so far, it can be recorded as a novelty that the traditional economic garden function has been relegated to the background in children, both on a conscious and subconscious level. The frequent appearance of the recreational and leisure

function and the artificial environment in the drawings indicates changes at the conscious level, while the extremely low level of depictions of humans and animals indicates subconscious changes. In addition, children's knowledge of the environment is poor, as evidenced by the limited representation of weather factors and basic elements of the environment (lawns, trees, animals).

7. AUTHOR'S PUBLICATIONS RELATED TO THE SUBJECT OF THE THESIS

Journal articles

Durmishi, Ledianë ✉; Bazsik, István; Farkas, Tibor, Community Support and collaboration in women's social cooperative Krusha e Madhe, EUROPEAN COUNTRYSIDE 15: 1 pp. 49-65., 17 p. (2023) DOI: <https://doi.org/10.2478/euco-2023-0004>

Ujj, Apolka ✉; Pércsi, Kinga Nagyné; Bazsik, István; Harkányi, Annamária; Jancsovszka, Paulina; Covid Crisis Experiences of Hungarian Small Family Farms Engaged in Multifunctional Agriculture; EUROPEAN COUNTRYSIDE 15 : 4 pp. 465-493. , 29 p. (2023); DOI: <https://doi.org/10.2478/euco-2023-0025>

Barna, Róbert; Bazsik, István; Farkas, Tibor; Koncz, Gábor; Bujdosó, Zoltán; Zártertek funkcióváltásának térbeli elemzése Csömörön és Kaposváron (Spatial analysis of the change of function of public gardens in Csömör and Kaposvár); A FALU 38 : 4 pp. 51-71. , 21 p. (2023)

Bazsik, István; Koncz, Gábor; Borfogyasztói és borturisztikai felmérés Monoron (Wine consumption and wine tourism survey in Monor); STUDIA MUNDI - ECONOMICA 8 : 3 pp. 3-15. , 13 p. (2021) DOI: <https://doi.org/10.18531/Studia.Mundi.2021.08.03.03-15>

Bazsik, István; Koncz, Gábor; A családi gazdaságok iskolások számára nyújtható szociális farm funkciói (Social farm functions for school children on family farms); TÉR-GAZDASÁG-EMBER 10: 1 pp. 43-62. , 20 p. (2022)

Bazsik, István; Vertikális integráció, mint a folyamatos technológiai innováció záloga (Vertical integration as a key to continuous technological innovation); GAZDALKODÁS 67 : 1 pp. 62-79. , 18 p. (2023) DOI: https://doi.org/10.53079/GAZDALKODAS.67.1.t.pp_62-79

Bazsik, István; Bujdosó, Zoltán ✉; Koncz, Gábor; A magyar gazdák helyzete a mezőgazdaság 3.0 és 4.0 korában: Agrár depriváció és társadalmi innovációk (The situation of Hungarian farmers in the era of agriculture 3.0 and 4.0: agricultural deprivation and social innovations); ACTA CAROLUS ROBERTUS 12 : 2 pp. 111-131. , 21 p. (2022) DOI: <https://doi.org/10.33032/acr.2907>

Bazsik, István; A szociális farmok helyzete és elméleti keretei (The situation and theoretical framework of social farms); STUDIA MUNDI ECONOMICA 9 : 2 pp. 12-23. , 12 p. (2022) DOI: <https://doi.org/10.18531/Studia.Mundi.2022.09.02.12-23>

Bazsik, István; Bujdosó, Zoltán ✉; Koncz, Gábor; Interrelations between Wine tourism and geotourism: a wine consumption survey in Monor (Hungary); GEOJOURNAL OF TOURISM AND GEOSITES 39 : 4 pp. 1517-1524. , 8 p. (2021) DOI: <https://doi.org/10.30892/gtg.394spl23-796>

Papers published in conference publications, full paper

Bazsik, István; A kisparcellás mikrogazdaságokban rejlő lehetőségek az élelmiszer önrendelkezés szempontjából (The potential of smallholder micro-farms on food sovereignty); In: Földi, Péter; Viktor, Patrik (szerk.) Közgazdász Doktoranduszok és Kutatók II. Rurális Konferenciája Konferenciakötet; Budapest, Magyarország : Doktoranduszok Országos Szövetsége (DOSZ) (2023) 328 p. pp. 24-31. , 8 p.

Bazsik, István A magyar mezőgazdaság leszakadó rétegei – digitális kompetencia-hiány és mikrogazdaságok (The lagging strata of Hungarian agriculture - digital skills gap and micro-farms); In: Földi, Péter; Viktor, Patrik (szerk.) Közgazdász Doktoranduszok és Kutatók II. Rurális Konferenciája Konferenciakötet; Budapest, Magyarország: Doktoranduszok Országos Szövetsége (DOSZ) (2023) 328 p. pp. 16-23. , 8 p.

Bazsik, István; Lőrinc, Balázs; Monor district settlements' investigation by complex development index; In: Arany, Ferenc (szerk.) RURALITY IN EUROPE 5th International Scientific Conference on Rural Development Conference Proceedings; Gödöllő, Magyarország : Hungarian University of Agriculture and Life Sciences (2022) 206 p. pp. 11-21. , 11 p.

Papers published in conference publications, abstract

Farkas, Tibor; Koncz, Gábor; Barna, Róbert; Bazsik, István; Bujdosó, Zoltán; A zártkertek helyzete és a zártkerti program (The situation of garden-plots and garden-plot programme) In: Bujdosó, Zoltán (szerk.) Egységet – Cselekvést – Teljesítést = Unit. Act. Deliver : XIX. Nemzetközi Tudományos Napok; = 19th International Scientific Days : Előadások és poszterek összefoglalói = Summaries of presentations and posters; Gyöngyös, Magyarország : Magyar Agrár- és Élettudományi Egyetem Károly Róbert Campus (2024) 105 p. pp. 30-30. , 1 p.

Bazsik, István; Recent situation and challenges in the Hungarian agriculture, In: International scientific conference New Challenges in Agricultural.Development, Brno (2023) Paper: Bazsik

Bazsik, István; A régi paraszti gazdaságok mai haszna: alkalmazd őseid tudását (The benefits of old peasant farms today: use the knowledge of your ancestors); In: Bujdosó, Zoltán (szerk.) Ezerarcú tudomány : A MATE Károly Róbert Campusán megrendezett 2022. évi workshop előadásainak összefoglalói;

Gyöngyös, Magyarország : Magyar Agrár- és Élettudományi Egyetem Károly Róbert Campus (2022) 61 p. pp. 15-15. , 1 p.

Bazsik, István; A COVID éve: 2021. A magyar makrogazdasági adatok tükrében (COVID year: 2021. In the light of Hungarian macroeconomic data); In: Horváth, Bálint; Földi, Péter (szerk.) Közgazdász Doktoranduszok és Kutatók VIII. Nemzetközi Téli Konferenciája; Budapest, Magyarország : Doktoranduszok Országos Szövetsége, Közgazdaságtudományi Osztály (2022) 238 p. , 10 p.