

SHORT FOOD SUPPLY CHAINS AS DRIVERS OF SUSTAINABILITY IN RURAL AREAS

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Abstract

Current food systems face major challenges in terms of sustainable development in social, economic and environmental dimensions. These challenges are related to the long-standing industrialization of agricultural production processes, the food industry and the associated longer and more transparent supply chains. The article was written in response to the question of the existence of short food supply chains (SFSC) in Bulgaria and their contribution to sustainable rural development. Cases and interviews were conducted with farm owners as representatives of the SFSCs in the country. A description of the case of SFSC in an organic farm in Bulgaria - Sofina farm is presented. Various survey methods have been applied, including primary data collection, case study approaches, interviews with farm managers, as well as desktop research. The conclusions we draw from the study relate to future policies that need to be followed to improve the sustainability of rural areas, which must undoubtedly take into account regional differences between actors in supply chains, different types and organizational forms of SFSCs, as well as the requirements of consumers regarding the delivered food.

Key words: Short Food Supply Chains (SFSCs), organic farms, rural area, sustainable development, Bulgaria

INTRODUCTION

Rural areas have always been the focus of researchers, agricultural experts and other sectors of the national economy, related to food supply chains, politicians and various international organizations. According to the regional typology of urban and rural areas, half of the territory of the European Union (EU-28) is covered mainly by rural areas and approximately 20% of the population is concentrated in them. Mostly rural regions are characterized by extreme diversity in terms of economic and social status, history, traditions, natural and cultural resources. The role of rural areas as producers of food and other important tangible and intangible goods is well understood. Rural areas provide traditional agricultural resources, but increasingly they also provide new vital functions that are used as a resource base for various activities, ways to implement various processes in agriculture, its technology and organization, impact management of the rural landscape, socio-economic development of the population living and working in them, as well as its income and quality of life.

The objectives of sustainable rural development is logically linked to the concept of multifunctionality of agriculture. The development of the multifunctionality of the regions themselves contributes in different ways to their sustainability. For example, direct marketing systems are one of the good practices that is developing more and more and on the basis of the increased interest in the existing rural tourism and the developing agricultural markets.

The aim of the study is to show examples of success that work well, enjoy the interest of users of these services and their developing farmers would contribute to the improvement of a common European policy that ensures the long-term maintenance of family farms outside the support of income. The EU's rural development policy aims at facing the economic, environmental and social challenges of the 21st century. It is known that the so-called "second pillar" of the Common Agricultural Policy deals with direct payments to farmers, and as regards measures to manage agricultural markets and support rural areas, they belong to the "first pillar" of this policy.

MATERIALS AND METHODS

The article aims to describe the Local Food System (LFSs) and Short Food Supply Chains (SFSCs) within the EU and in particular Bulgaria, considering them as one of the domains of multifunctional agriculture contributing to the better and sustainable development of rural areas. In this article, the author considers the multifunctionality of the agricultural sector as a continuously developing direction in agriculture, which began with the transition from industrial agriculture, based on a large volume of production to quality one that strives to achieve a comprehensive sustainability with economic, environmental and social components. The main types of LFSs /SFSCs are considered as a manifestation of one of the domains of multifunctional agriculture. The author further examines the types of SFSCs and their impact on sustainable development in social, economic and environmental aspects. One organic family farm in Bulgaria as a representative of the LFS has been described using the case study method. The case study approach is using as a means of collecting data and testing theory. A mixed survey method was applied including primary data collection, case study, in-depth interviews, as well as desktop research.

Concept of multifunctionality

Multifunctional agriculture is an umbrella term used to indicate companies that combine their agricultural production and environment with services to society: care farming, farm education, farm shops/short supply chains, agricultural day care, agricultural nature management and agrotourism. Key to these services is the relationship between farms and civilians/consumers. In other words, multifunctional agriculture is the reconnection of agriculture to society. The stages of multifunctionality in agriculture: United Nations Conference on Environment and Development (1992, Rio de Janeiro - Brazil) [36]: the concept of multifunctionality first appears. European Conference on Rural Development (1996, Cork -Ireland) [16]. For the first time, the role of rural areas has been officially recognized and legitimized as a

privileged place to meet the needs of farmers and citizens. Moreover, rural areas have been linked to improving the quality of life.

1998 - The OECD closely links the concept to two specific requirements: 1) production capacity of secondary, tangible and/or intangible goods and services; 2) recognition of certain intangible assets and their external nature as public goods [26].

1999 - Berlin (Germany), Berlin European Council, Program 2000. Agricultural structural policy agreements and related regulations are already in place. The latter becomes a real part of Community policy [6].

The concept of multifunctionality from the Cork Conference (1996) to the Cork Conference (2016) [16]. The new moments we are meeting here are extremely important for the further development of rural areas and their multifunctional sound: promoting the prosperity of rural areas; strengthening rural value chains; investing in the profitability and vitality of rural areas; preservation of rural environment; natural resources management; promoting climate change interventions; stimulating knowledge and innovation; strengthening rural governance. In Bulgaria this potential is limited by multiple factors. The most important factor is that the concept of multifunctional agriculture is not well-known in the country and there is no common, purposeful and consistent policy to popularize and develop this type of activities (Todorova, 2013) [34]. The government of the country does not implement the concept of multifunctionality in the National Plan for Rural development but use relative concepts such as “economic diversification”, “rural development” or “alternative activities”. The examples existing in the practice are realized as a private initiative on a free principle and with financial support by European projects without any assistance and coordination from the government (Todorova, 2013).

Short Food Supply Chains

The location of production and the length of the food supply chain have been and continue to be of interest to many researchers and they have been well studied. Most researchers define "Local Food Systems" as those in which the production, processing, marketing and

consumption of food takes place in a limited geographical area with a source radius of about 20 to 100 km. A key feature of short food supply chains is that these are places where the number of intermediaries is kept to a minimum. The ideal case is direct contact between producer and the consumer. Building on seminal papers of Marsden et al. (2000) [20] and Renting et al. (2003) [29], as well as on definitions proposed by the French authorities or the European Commission, the following definition of SFSC has been adopted: “The foods involved are identified by, and traceable to a farmer. The number of intermediaries between farmer and consumer should be “minimal” or ideally “nil”. The marketing of food through a short supply chain, which business is organized mainly by small and medium-sized organizations without a special marketing unit, is constantly growing. It can be said that the definition of SFSCs introduced by Marsden et al. (2000) [20] and commonly used by others, covers LFS within the face-to-face and spatially proximate SFSCs categories.

There are different short food supply chains in terms of number of intermediaries.

Category of “sales in proximity” - most of them can be grouped following Aubry and Chiffolleau (2009) [5]. They are also local farming systems, in the sense that locally grown or produced foods are served to local consumers. So-called Community-supported agriculture (CSA) and similar schemes are known by different names in the Member States (AMAP, GAS, etc.). and are based on a long-term partnership between one or more producers and their consumers. In them, consumers are more connected with the decisions and work of producers. Types of on-farm schemes are numerous, where consumers transport themselves to the place of production to purchase the products of a farmer (farm shops, farm based hospitality, roadside sales, pick-your-own schemes, etc.).

Farmers sell off-farm their products to consumers - in the neighbouring places of consumption, in farmers’ markets, shops owned by farmers, food festivals and fairs.

Impacts of LFS/SFSCs

Social impacts of SFSCs

The SFSCs support and facilitate the connection and interaction between farmers and consumers. All this leads to building trust between the participants in the chain and encouraging the development of social capital (Table 1). These short food supply chains can create the conditions for the development of a sense of community and 'living together'. When based in rural areas, SFSCs can also affect the quality of life in the areas concerned. In urban areas, SFSCs focus more on promoting social change through education and ethics for sustainability.

Table 1. Social impacts of LFS/SFSCs

Social impacts	Studies
<i>Connection between producer & consumer</i> <i>Notions of trust and relationships; Relations of regard; Wider concept of social capital.</i>	Abatekassa and Peterson (2011); Canavan et al., (2007); Chiffolleau (2009); Mount (2011); Murphy (2011); Sage (2003); Smithers et al. (2008). [1, 7, 8, 24, 25, 30, 32].
<i>Sense of community</i>	Abatekassa and Peterson (2011); Chiffolleau (2009); DeLind (2011); Hayden and Bucks (2012); Lawson et al. (2008). [1, 8, 12, 17, 19].
<i>Increased knowledge / behavioural change</i>	Cox et al. (2008); Hayden and Buck (2012); Torjusten et al. (2008). [11, 17, 35].

Source: own research.

Economic impacts of LFS/SFSCs

There are records that local farming systems and short chains have a higher multiplier effect on local economies than long chains, with impacts also on maintaining local employment, especially in rural areas, the synergies with the tourism sectors are also well acknowledged, as a producer at farm level, they seem to allow a higher share of value added to be retained locally (Table 2).

Environmental effects

Usually the environmental benefits that are cited in the literature and we support are: food miles and carbon footprint for local food, positive impact on (agro) biodiversity and reduce the use of agrochemicals for organic farms (Table 3). Re-localization of production can lead to a drastic reduction in GHG emissions. The production and processing methods that are applied in modern conditions are extremely important for mitigating the impact on the environment.

Table 2. Economic impacts of LFS/SFSCs

Economic benefits of LFS/SFSCs	Studies
LFS/SFSCs contribute towards rural development and economic regeneration	Du Puis and Goodman (2005) state that SFSCs can be “seen as new sources of value added which can be retained locally and can act as a catalyst for rural economic regeneration and dynamism.” SFSCs create “new economic spaces” (quoting Van der Ploeg et al. 2000; Marsden et al. 2002; Renting et al. 2003) [13, 28, 20, 29].
Farm level economic impacts: increased income for the producer	Producers are able to add a price premium when selling through SFSCs (Pearson et al., 2011), that the elimination of the “middleman” enables farmers to receive a greater share of the profits (Sage, 2003) and that SFSCs provide growers with an opportunity to diversify and add value to their produce (Alonso, 2011). [27, 30, 4].
Synergies with the tourism sectors	Pearson et al. (2011) have suggested that LFS offer opportunities for tourism and further positive associated economic impacts: “An additional economic benefit of LFS is the potential from increased tourism due to local branding and recreational shopping opportunities” [27].

Source: own research.

Table 3. Environmental impacts of LFS/SFSCs

Environmental impacts	Studies
<i>Energy use and carbon footprint</i> - reduction in “food miles” associated with LFS and SFSCs as an environmental benefit.	Tim Lang (1992) created the concept of food miles. A number of new studies show that this concept does not give a true picture of the total greenhouse gas (GHG) emissions involved in the whole food supply system. There are GHG emissions associated with production, processing and storage which these comparisons do not take into account (AEA Technology 2005; Edwards-Jones et al. 2008). Recently environment by using life cycle analysis (LCA) (Cowell & Parkinson 2003; Williams et al. 2006; Milà i Canals et al. 2007; Edwards-Jones et al. 2008; Edwards-Jones 2010). [2, 14, 10, 38, 22, 15].
<i>Sustainability and SFSCs</i>	Intensive agriculture has a serious negative impact on the environment. Intensive farming practices are based on “simple, artificial agro-ecosystems that rely on human resources to regulate them” (Hole et al. 2006; Stuart 2008). For any type of SFSCs with an organic component, it can be assumed that there are benefits to biodiversity associated with the lack of agrochemicals in the system (Hole et al. 2006; Seyfang 2008). This could be said for a number of organic SFSCs, including cash schemes, direct sales and markets for farmers. [18, 33, 31].

Source: own research.

Rural development

Rural development is the process of improving the quality of life and economic well-being of people living in rural areas, often relatively isolated and sparsely populated areas (Moseley M., 2003) [23]. Rural development actions are intended to further the social and economic development of rural communities (Chigbu, 2012; World Bank, 1975) [9, 37]. Rural development can be seen as a process that is associated with social change in the rural community and sustainable economic progress of this community. The aim of this process is to improve the quality of life in rural areas and to protect the environment.

Rather, the following objectives are pursued:

1. Improving the well-being of people living in rural areas (nearly half of the world's population), eradicating poverty and preventing urban migration.
2. Preservation of natural, landscape and cultural resources.
3. Ensuring access to food as a result of the development of sustainable agricultural production.

Farmers are those who daily supervise and manage rural areas, but still their collaborations with those institutions entitled to decide the transformation of these territories are not managed properly (Menconi, Grohmann & Mancinelli, 2017) [21]. The rural development is the core of the development policies because rural areas are a growing source of manufacturing and service-sector production and provide employment and have quality of life attributes that are increasingly valued by citizens.

Local context

For any type of SFSC with an organic component, it can be assumed that there are benefits for biodiversity associated with the lack of agrochemicals in the system (Hole et al. 2003; Seyfang 2008) [18, 31]. This could apply to a range of organic SFSCs including box schemes, direct sales and farmers markets.

As of the end of 2013 (Table 4), the total number of bio-operators in Bulgaria registered in the MAFF is 3, 123 (this figure does not include the number of subcontractors), which is about 1,000 more than the previous 2012 (Table 4).

According to MAFF, according to data from the annual reports of the controllers of organic production, in 2015 they increased to 6,173 and in 2016 to 7,262 (Agrarian Report, MAFF, 2017) [3]. Of these, in 2016, 6,961 were producers, 3 were aquaculture producers, 177 were organic processors and 121 were traders (importers, exporters, wholesalers and retailers).

Table 4. Number of operators (producers, processors, traders) in organic production

Years	Number of operators in bio-production
2006	214
2007	339
2008	311
2009	476
2010	820
2011	1,054
2012	2,016
2013	3,123
2015	6,173
2016	7,262

Source: MAFF, based on data from annual reports of controllers of organic production.

The data shows that the number of registered operators (producers, processors and traders) in the control system in 2013 increased more than 6 times compared to 2009, the year of the new European organic farming legislation. Organic farmers began receiving payments from the government; the association of organic farmers was established; the association of traders of organic food was set up; organic agriculture in Bulgaria began developing into a real economic sector. In 2016, this number has doubled compared to 2013, the main reason being the subsidies granted to registered bio-operators.

Organic farming represents real opportunities on several levels, contributing to rural economies. The environmental advantages of these farming systems can bring significant benefits for the rural economy and for development of multifunctional agriculture including Short Food Supply Chains.

Case Study

Title of the experience: Organic farm Sofina, Local leadership, adding external support from institutions and policies.

Key words: Short Food Supply Chain, Marketing competences, Entrepreneurship.

Location: village of Lesново near the town of Elin Pelin, just 20 km from Sofia.

Short description of the initiative:

The Sofina family farm has been in existence since the beginning of 2009 and is located in the village of Lesново near the town of Elin Pelin. Here, Stoyan and Teodora Simeonov take care of nearly 70 acres of bio-certified plantations. Their farm products include nuts, hazelnuts, different types of tomatoes, cucumbers, zucchini, peppers, celery, pumpkins, carrots, potatoes, beets, beans, spinach, as well as the non-standard kale and chard, which are extremely unusual for our region.

The proximity of the farm to Sofia allows the products to be picked up a few hours before delivery to be as fresh as possible when they reach customers. No couriers are used, but the products are always delivered in person less than 24 hours ago.

The farm strives to provide the widest possible range to offer to its customers. About 60-70 different products are grown, each of which during the respective season of the year.

Life in the field is not easy - it works nearly 12 hours a day, and there is often no rest time. Both daughters of the farmers, aged 7 and 19, as well as workers from the nearby villages are helping.

Most of the seeds used are theirs - each year they leave, for example, a few zucchini to ripen and the next year we sow seeds from them.

Sofina Organic Farm is certified and controlled by "Q Certification" AD, Plovdiv. After a transitional period, the farm has a certificate of production since 2014. The certificate is reissued for each subsequent year after a number of inspections have been carried out by the controlling body of "Q Certification" AD, Ministry of Agriculture, Food and Forestry, Bulgarian Food Safety Agency.

Actors involved: farmer, farm family, local municipality, Bulgarian Food Safety Agency, Bulgarian Bioproducts Association, shop.

Results and learned lessons: how food from a farm ends up on our tables, the processes include production, processing, distribution, the food production; chain includes aspects from processing, distribution, consumer purchase and consumer use.

RESULTS AND DISCUSSIONS

Many studies emphasize that trust building is a major component and important advantage of LFS/SFSC. Our case shows that building relationships between the consumer and the manufacturer is "essential" and provides a "unique experience". The product can be explained to the consumer and many people (especially those who love bio-products) prefer to talk to someone who knows something about a particular product. This trust is built through face-to-face interaction between the farmer and consumers. It is supposed that trust does not refer to the product per se, but to the idea that one can trust the farmer who produces this food in a "safe" way, since the consumer knows the farmers and can hold them "responsible". We also discuss the market in terms of "community" - building a place and improving relationships around food and neighborhood activities (DeLind, 2011; Abatekassa & Peterson, 2011) [12, 1].

A number of LFS/SFSCs seek to build communities and relationships around food production and consumption. The latter has been described in a number of studies from different countries.

SFSCs lead to changes in the behavior of the participants, which can be explained by the accumulation of knowledge. This benefit has been highlighted in many studies based in the United States, the United Kingdom, Denmark and Norway.

For example, in our case, participants in the scheme gain increased knowledge of food and agricultural systems. For example, in our case, the participants in the scheme gain increased knowledge of food and agricultural systems. Increased knowledge related to their daily routine as well as the food consumed can lead to some changes in behavior. In their research, Cox et al. (2008) [11] and Hayden & Buck (2012) [17] found a broader change in participants' behavior in CSA schemes. Cox et al., (2008) [11] called this the "graduation effect". Consumers of vegetables from the farm under study in our case state that their cooking and eating habits have changed, which has been fueled by the use of more local, seasonal and healthy food.

Many studies suggest that LFS/SFSCs can contribute to rural development and economic recovery. Du Puis and Goodman (2005) [13] state that SFSCs can be "regarded as new sources of added value that can be locally maintained and can act as a catalyst for rural economic regeneration and dynamism".

A number of economic benefits associated with LFS/SFSC are known. The increase in revenue for the producer as a result of the elimination of intermediaries is one of the important economic benefits. It is assumed that producers are able to add a price premium at sale by SFSC (Pearson et al., 2011) [27] that the elimination of the "middleman" allows farmers to receive a greater share of the profits (Sage, 2003) [30] and that SFSCs provide giving producers the opportunity to diversify and add value to their output (Alonso, 2011) [4].

The key to our case is to reduce the distance between farmers and consumers and to improve communication between them, thus providing more flexibility and more choice for both parties. Farmers can plan and achieve their sales goals - better pricing conditions and less dependency on intermediaries; and consumers can enjoy the taste, freshness and quality of organically produced food.

The environmental benefits of the sources cited in Table 3 include: a reduction in "food miles" and a carbon footprint for local food, the positive impact on (agro-) biodiversity and reducing the use of agrochemicals for organic farms. There is considerable research on the relative impact of organic substances in comparison with "conventional" manufacturing practices, but this evidence is not reviewed here as the focus of the study is on SFSCs, not organic production.

Earlier articles have mostly discussed the reduction in food miles associated with LFS and SFSCs as an environmental benefit. The concept of food miles, first created in 1992 by Tim Lang, is relatively straightforward to understand and comparisons between food items are easily made with respect to the carbon emitted when transporting the goods from the producer to the retailer or consumer (Edwards-Jones et al., 2008; Seyfang, 2008).

There are GHG emissions associated with production, processing and storage which these comparisons do not take into account (AEA Technology 2005; Edwards-Jones et al., 2008) [2, 14]. In our case, the vegetables offered are not stored, processed, and hours after harvest go to the consumer.

Most recently, researchers have evaluated the environment impact of foodstuffs using LCA. A combination of “organic” and “local” indicators can usually give a better idea of the environmental significance of each SFSC, as in our case.

The condition for fulfilling the latter is that organic and local products are not stored and purchased out of season, as otherwise these products may have a larger carbon footprint than non-local goods.

Table 5. Summary of identified effects of SPSCs in the Sofina farm case on the three dimensions of sustainability

Dimensions of sustainability	Social	Preserving traditional agricultural production; Better satisfaction for farmers and consumers; Raising awareness of the environmental and social effects of consumption; Change in consumer behaviour; Building new relationships between different actors with different interests.
	Economic	Increasing farmers' incomes - higher selling prices; Creation of employment opportunities; Increasing regional added value; Reducing dependence on intermediaries.
	Environmental	Conserving traditional agricultural practices and landscapes; Positive impact on biodiversity and reducing the use of agrochemicals for organic farms; Encouraging environmentally friendly production methods (low input production, organic production, etc.); Reduction in „food miles“; Carbon footprint for local food.

Source: Own research.

As a result of the literature reviewed and the case study applied to Sofina farm, as well as a study of a number of other farms that directly sell their products to consumers (among other multifunctional activities they carry out - rural tourism, didactic agriculture and so on) and they have been the subject of a study on the implementation of the e-TOMATO project we have summarized the social, economic and

environmental benefits of shortening the food supply chain in Table 5.

CONCLUSIONS

The Program for Rural Development 2014-2020 was identified the opportunity to expand markets and increase consumer demand for food with guaranteed quality and origin, local products as well as organic products manufactured to high environmental standards. The needs assessment also includes shortening the supply chain of food and encouraging local market.

How will develop channels for direct food supply in the future? This will largely depend on the geographical location of a country or region, its social status and its political and institutional characteristics and features. Public funding and support, plus community interest, is essential for setting up and maintaining local food networks in operation.

In many cases, the concept of local and healthy food is unclear or misleading to the average consumer. Therefore, sufficient research is needed in this direction and a clear policy on the part of European governments.

There is a possibility to use food from SFSCs in the context of healthy and sustainable rural development.

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REFERENCES

- [1] Abatekassa, G., Peterson, H. C., 2011, Market Access for Local Food through the Conventional Food Supply Chain. *International Food and Agribusiness Management Review* 14 (1), 63-82.
- [2] AEA Technology Environment, 2005, The Validity of Food Miles as an Indicator of Sustainable Development: Final report. Report number: ED50254, Issue 7 http://library.uniteddiversity.coop/Food/DEFRA_Food_Miles_Report.pdf, Accessed on April 8, 2020.
- [3] Agrarian Report, MAFF. (2017). https://www.mzh.government.bg/media/filer_public/20

- 18/02/28/agricultural-report-2017_en.pdf, Accessed on April 17, 2020.
- [4]Alonso, A., 2011, Farmers' involvement in Value-Added Produce: The Case of Alabama Growers. *British Food Journal* 113 (2), 187-204.
- [5]Aubry, C., Chiffolleau, Y., 2009, Le développement des circuits courts et l'agriculture périurbaine: histoire, evolution en cours et questions actuelles. *Innovations Agronomiques* 5, 53-67.
- [6]Berlin European Council, 24 and 25 March, 1999, https://www.europarl.europa.eu/summits/ber1_en.htm, Accessed on April 10, 2020.
- [7]Canavan, O., Henschion, M., O'Reilly, S., 2007, The use of the Internet as a Marketing Channel for Irish Speciality Food. *International Journal of Retail and Distribution Management* 35 (2), 178-195.
- [8]Chiffolleau, Y., 2009, From Politics to Co-Operation: The Dynamics of Embeddedness in Alternative Food Supply Chains. *Sociologia Ruralis* 49 (3), 218-235.
- [9]Chigbu, U.E., 2012, Village Renewal as an Instrument of Rural Development: Evidence from Weyarn, Germany. *Community Development*, Vol. 43(2), pp.209-224, <http://www.tandfonline.com/doi/abs/10.1080/15575330.2011.575231#preview>, Accessed on April 20, 2020.
- [10]Cowell, S.J., Parkinson, S., 2003, Localisation of UK food production: an analysis using land area and energy as indicators, *Agriculture, Ecosystems and Environment*, 94
- [11]Cox, R., Holloway, L., Venn, L., Dowler, L., Ricketts-Hein, J., Kneafsey, M., Tuomainen, M., 2008, Common Ground? Motivations for Participation in a Community-Supported Agriculture Scheme. *Local Environment* 13 (3), 203-218.
- [12]DeLind, L. B., 2011, Are Local Food and the Local Food Movement Taking Us Where we Want to Go? Or are we Hitching our Wagons to the Wrong Stars? *Agriculture and Human Values* 28 (2), 273-283.
- [13]DuPuis, M., Goodman, D., 2005, Should we go 'home' to eat?: Toward a Reflective Politics of Localism. *Journal of Rural Studies* 21, 359-371.
- [14]Edwards-Jones, G., Canals, L. M., Hounsome, N., Truninger, M., Koerber, G., Hounsome, B., Cross, P., York, E. H., Hospido, A., Plassmann, K., Harris, I. M., Edwards, R. T., Day, G. A. S., Tomos, A. D., Cowell, S. J., Jones, D.L., 2008, Testing the Assertion that "Local Food is Best": The Challenges of an Evidence-Based Approach. *Trends in Food Science and Technology* 19, 265-274.
- [15]Edwards-Jones, G., 2010, Does Eating Local Food Reduce the Environmental Impact of Food Production and Enhance Consumer Health? *Proceedings of the Nutrition Society* 69, 582-591.
- [16]European Conference on Rural Development, Cork (Ireland), (1996). https://enrd.ec.europa.eu/sites/enrd/files/cork-declaration_en.pdf, Accessed on April 12, 2020.
- [17]Hayden, J., Buck, D., 2012, Doing Community Supported Agriculture: Tactile Space, Affect and Effects of Membership. *Geoforum* 43 (2), 332-341.
- [18]Hole, D.J., Perkins, A.J., Wilson, J.D., Alexander, I.H., Grice, P.D., Evans, A.D., 2006, Does organic farming benefit biodiversity? *Biological Conservation* 122, 113-130.
- [19]Lawson, R., Guthrie, J., Cameron, A., Fischer, W. C., 2008, Creating Value through Cooperation: An Investigation of Farmers' Markets in New Zealand. *British Food Journal* 110 (1), 11-25.
- [20]Marsden, T., Banks, J., Bristow, G., 2000, Food Supply Chain Approaches: Exploring their Role in Rural Development, *Sociologia Ruralis*, 40 (4), 424-438.
- [21]Menconi, M., Grohmann, D., Mancinelli, C., 2017, European farmers and participatory rural appraisal: A systematic literature review on experiences to optimize rural development, *Land Use Policy*, 60, <https://www.journals.elsevier.com/land-use-policy>, Accessed on April 12, 2020.
- [22]Milá i Canals, L., Bauer, C., Depestele, J., Dubreuil, A., Freiermuth Knuchel, R., Gaillard, G., Michelsen, O., Möller-Wenk, R., 2007, Key elements in a framework for land use impact assessment within LCA. *International Journal of Life Cycle Assessment* 12(1), 5-15.
- [23]Moseley, M. J., 2003, *Rural development: principles and practice* (1. publ. ed.). London [u.a.]: SAGE. p. 5.
- [24]Mount, P., 2011, *Growing Local Food: Scale and Local Food Systems Governance*. *Agriculture and Human Values*, 1-15
- [25]Murphy, A. J., 2011, Farmers' Markets as Retail Spaces. *International Journal of Retail and Distribution Management*. 39 (8), 582-597.
- [26]OECD, 1998, *National Efforts to Measure Intangible Investment*, <https://www.oecd.org/sti/ind/1943317.pdf>, Accessed on April 17, 2020.
- [27]Pearson, D., Henryks, J., Trott, A., Jones, P., Parker, G., Dumaresq, D., Dyball, R., 2011, Local Food: Understanding Consumer Motivations in Innovative Retail Formats. *British Food Journal* 113 (7), 886-899.
- [28]Ploeg, J.D. van der, Renting, H., Brunori, G., Knickel, K., Mannion, J., Marsden, T., Kees de Roest, Sevilla-Guzmán, E., Ventura, F., 2000, Rural Development: From Practices and Policies towards Theory. *Sociologia Ruralis* 40(4):391-408., https://www.researchgate.net/publication/227786245Rural_Development_From_Practices_and_Policies_Towards_Theory, Accessed on April 12, 2020.
- [29]Renting, H., Marsden, T., Banks, J., 2003, Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development. *Environment and Planning A* 35, 393-411.
- [30]Sage, C., 2003, Social Embeddedness and Relations of Regard: Alternative 'Good Food' Networks in South West Ireland. *Journal of Rural Studies* 19, 47-60.
- [31]Seyfang, G., 2008, Avoiding Asda? Exploring Consumer Motivations in Local Organic Food Networks. *Local Environment* 13 (3), 187-201.
- [32]Smithers, J., Lamarche, J., Joseph, A., 2008, Unpacking the Terms of Engagement with Local Food

at the Farmers' Market: Insights from Ontario. *Journal of Rural Studies* 24, 337-350.

[33]Stuart, D., 2008, *The Illusion of Control: Industrialized Agriculture, Nature, and Food Safety*. *Agriculture and Human Values* 25 (2), 177-181.

[34]Todorova, S., J. Ikova, 2013, *Multifunctional Agriculture: social and ecological impacts on the organic farms in Bulgaria*, *Procedia Economics and Finance*, Elsevier Original research paper available on-line: www.sciencedirect.com

[35]Torjusen, H., Lieblein, G., Vittersø, G., 2008, *Learning, Communicating and Eating in Local Food-Systems: The Case of Organic Box Schemes in Denmark and Norway*. *Local Environment* 13 (3), 219-234.

[36]United Nations Conference on Environment & Development Rio de Janeiro, Brazil, 3 to 14 June 1992, <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>, Accessed on April 12, 2020.

[37]World Bank, 1975, *Rural development. Sector policy paper*. Washington, DC: The World Bank. <http://documents.worldbank.org/curated/en/522641468766236215/Rural-development>, Accessed on April 10, 2020.

[38]Williams, A.G., Audsley, E., Sandars, D.L., 2006, *Determining the environmental burdens and resource use in the production of agricultural and horticultural commodities*. In: *Main Report*, Defra Research Project IS0205, Cranfield University and Defra. <http://www.defra.go.uk>, Accessed on April 10, 2020.

