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Country report 10: Green niche-innovations in the Hungarian agro-food system

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Contents

- Executive summary 3
- 1. Introduction..... 5
- 2. Case selection..... 8
 - 2.1. List of potential green niche-innovations 8
 - 2.2. Selection of 4 main niche innovations 8
- 3. Analysis of momentum of 4 niche innovations10
 - 3.1. Organic Agriculture.....10
 - 3.1.1. Innovation and market trajectory10
 - 3.1.2. Actors and social networks (socio-cognitive)12
 - 3.1.3. Institutions, Governance and Policy14
 - 3.1.4. Summary and Future Outlook15
 - 3.2. Vegetarianism/lowering meat consumption.....16
 - 3.2.1. Innovation and market trajectory16
 - 3.2.2. Actors and social networks (socio-cognitive)17
 - 3.2.3. Institutions, Governance and Policy18
 - 3.2.4. Summary19
 - 3.3. Localized food chains/regional food production.....19
 - 3.3.1. Innovation and market trajectory19
 - 3.3.2. Actors and social networks (socio-cognitive)20
 - 3.3.3. Institutions, Governance and Policy22
 - 3.3.4. Summary23
 - 3.4. Community supported agriculture.....23
 - 3.4.1. Innovation and market trajectory24
 - 3.4.2. Actors and social networks.....25
 - 3.4.3. Governance and policy25
 - 3.4.4. Summary26
- 4. Conclusion.....27
 - 4.1. Overall assessment of momentum.....27
 - 4.2. Conclusion about transition pathways27
- References28

Executive summary

From a socio-technical systems viewpoint the Hungarian agro-food sector could be depicted as a dual economy with a large-scale agro-industry and service providers, on the one hand, and dispersed small producers and organizations on the other. Hungary joined the EU ten years ago and recent studies have shown that for the most part the country's agri-food sector has been on the losing side of EU accession.

Sustainability goals have been introduced through the Hungarian Agri-Environmental Programme (HAEP) but Hungary still has the lowest rate of organic production in the EU. Remnants of informal and non-market mechanisms within the economy that evolved as a way of compensating for the supply side deficiencies of the planned economy helped maintain a strong local food culture and some aspects of sustainable agriculture in traditional agricultural family households.

A recent stocktaking of short food supply chain and local food system development differentiated between two types of supply chains. On the one hand the 'traditional' short food supply chains (SFSCs) that are farm-based, in rural locations, usually operated on-farm by family businesses and using traditional and artisanal production methods. On the other hand the 'neo-traditional' supply chains, more consisting of complex collaborative networks, often off-farm (delivery schemes in particular) or with strong social and ethical values (community supported agriculture - CSAs), urban (or peri-urban)-centred are more subject to a non-profit approach¹. Recent simplification of food legislation on short food supply chains (SFSCs) and local food systems (LFSs) helped traditional food supply systems (e.g., such as farmers' markets, roadside and farm gate sales, you-pick farms, local food festivals and food trails) gaining widespread attention. Other 'neo-traditional' supply schemes, typically initiated by urban non-farmers (such as local food shops, purchasing groups, Community Supported Agriculture (CSAs) have also gained momentum (Balázs 2012, Balázs 2013).

Top-down policy processes under the New Agricultural and Rural Development Strategy 2020 open a window of opportunity for bottom-up initiatives. By creating an enabling environment, proportionately much higher allocation of (financial) resources for LFSs and SFSCs was made available.

The strongest actors of the agro-food sector are large-scale processors and traders; whereas retailers control vertical food supply chains and small-scale producers have the least power to influence supply chains. Producers often need to make use of their own funds because of the high cost of loans and the relative immaturity of the farm credit and crop insurance system, particularly in the small producer segment of the sector. Lack of trust, capital shortage and hostile feelings towards co-operatives hinder the cooperation of the small participants of the agro-food sector. A very high level of consumers' total income is spent on food while relatively high proportion of the population is taking an active part in food self-provisioning. A recent study suggest that in a survey representative to the adult population of Hungary 36 percent of respondents stated that they have or use a garden, field or orchard, either by their house where they live or elsewhere².

The reality of organic farming in Hungary is that overall momentum of the movement is low, but in spite of this, the outlook is likely greater now than any point within the last decade. It is expected that gaining the full benefits EU support which is shifting to prioritizing ecological farming will give the organic sector in Hungary a much needed boost.

Vegetarian eating habits are constantly broadening especially among health conscious consumers and a new niche-market has been constructed within the counterproductive food policy framework promoting the expansion and modernisation of animal husbandry.

¹ Kneafsey, M., Venn, L., Schmutz, U., Balázs, B., Trenchard, L., Eyden-Wood, T., Bos, E., Sutton, G., and Blackett, M. (2013) Short Food Supply Chains and Local Food Systems in the EU. A State of Play of their Socio-Economic Characteristics. JRC Scientific and Policy Reports Number 25911 EN, Joint Research Centre. Institute for Prospective Technological Studies, Luxembourg.

² Balázs, Bálint (2014): Food Self-Provisioning in Hungary (unpublished manuscript).

Restaurants and food-delivery enterprises supplying vegetarian food have only a limited market share growth.

Alternative food production and distribution schemes in Hungary play an increasing role in restoring relationship between urban and rural areas. Struggles with financial autonomy, self-sustainability, and challenges of remaining only a sporadic example with no real momentum are on the current horizon.

The CSA sector is likely to expand through facilitating learning processes by educating members in adhering to healthier diets, and procuring food in a more environmentally friendly way, while also assisting the development of community relations, fostering the culture of sharing, gifting, bartering and donating. The main risk for farmers is to rely only on external financial resources to shape their markets.

1. Introduction

The main developments in the agro-food system in Hungary

From a socio-technical systems viewpoint the Hungarian agro-food sector could be depicted as a dual economy with a large-scale agro-industry and service providers on the one hand and dispersed small producers and organizations on the other. In 2010 there were 8,800 farms functioning as commercial organisations (cooperatives and commercial farms) and 567,000 managed by private individuals. Legal entities (farm enterprises) used on average 337 ha of land, while the average size of individual farms was 4.6 ha. Only 4 per cent of commercial organisations used 1 ha or less, while two thirds of farms managed by individuals were equal to or smaller than 1 ha. The latter were mostly managed using low-intensity methods without and no agro-chemicals. 60 per cent of the 567,000 individual farms produced for self-consumption (KSH, 2012).

After the political transitions in 1989 Hungary saw the rapid and unfettered introduction of various market-based organizational forms under the ideology of neo-liberalism and involving privatisation, liberalisation and market-based policies. Given the lack of adequate representation in this period of the public interest, many of the measures are now considered symptomatic of 'wild capitalism'. The process started with market acquisition by large foreign food companies. Food processing industries were the first targets of privatisation, involving significant foreign direct investment in the agro-food sector. Given the collapse of Hungary's export markets in the former Eastern Bloc and widespread corruption involving both domestic players and foreign investors, enterprises in the agri-food sector were often privatized at firesale prices. Many of them have been subsequently liquidated by the new owners, who were often interested only in acquiring market share for imported products. In only ten years foreign ownership in the Hungarian food processing sector exceeded 60 percent (Jansik, 2000). Hungary joined the EU in 2004 and recent studies have shown that for the most part the country's agri-food sector also lost out to EU accession with specific regard to agricultural, agri-environmental and rural performance (Jambor & Sirone Varadi, 2014). The traditionally export-oriented agro-food industry (mostly based on industrial crops - Maize, Wheat, Rapeseed, Barley, Sunflower seed, Pet Food, Cow milk, Glucose and Dextrose, Sunflower oil, Refined Sugar) initially performed promisingly, but export performance has greatly deteriorated over time (Fertő & Hubbard, 2003). Today Hungary's trade balance in agri-food products with the EU-15 is unrealistically negative, given the country's agro-ecological potential and traditional role as a food producer. Part of this is explained by weaknesses in Hungarian agri-food export competitiveness, as the sector failed to adapt to changes in demand in its reconfigured export markets (Juhász & Wagner, 2013). Price and quality competitiveness of lower-priced cereal and oilseed commodities shows relative potential in this respect. Studies did not confirm that production of first generation GM crops would improve the productivity or decrease the production costs of farmers to result in increased competitiveness (Matolay, 2013). Since 2012 the Hungarian Constitution has banned the use of GMOs.

For the first time in the agri-food sector significant incentives connected to sustainability goals have been introduced through the Hungarian Agri-Environmental Programme (HAEP). Launched as a pilot project in 2002 HAEP was subject to ongoing political power struggles. The main emphasis remained on the distribution of financial resources, thus original objectives (environmental protection and effective social learning) were not entirely fulfilled (Nemes, 2010). Studies found it difficult to assess the impact on the level of internalisation of environmental issues, or how much of the improvements could be maintained if financial support stopped (Balázs, Bodorkós, Bela, Podmaniczky, & Balázs, 2009). Recent analysis has revealed that both the structure and content of the relevant knowledge needed in the agri-food sector have significantly changed during the past decades: new sustainability requirements and challenges are not appropriately handled by traditional institutions of the agricultural knowledge system (Nemes & High, 2013). In spite of favourable geographic conditions and high potential for organic farming, Hungary has the lowest rate in organic production in the EU at 2.3% (130,609

ha) of the total agricultural land (Drexler & Dezsény, 2013). Various stakeholders of the sector already signed up for a National Action Plan for the Development of Organic Farming (2014-2020).

In Hungary the remnants of an informal economy that evolved as a way of compensating for the supply side deficiencies of the planned economy (Sik, 1992) but that also has deeper cultural roots reaching back to pre-socialist times helped maintain a strong local food culture and some aspects of sustainable agriculture in traditional agricultural family households. Food provisioning is still practised via non-market mechanisms and contributes to a high level of food self-sufficiency (Smith & Jehlička, 2013). Recent simplification of food legislation on short food supply chains (SFSCs) and local food systems (LFSs) helped traditional food supply systems, such as farmers' markets, roadside and farm gate sales, you-pick farms, local food festivals and food trails gain widespread attention, whereas other 'neo-traditional' supply schemes, typically initiated by urban non-farmers such as local food shops, purchasing groups, CSAs have recently gained momentum (Kneafsey et al., 2013). Although less than one-fifth of the farms are involved in direct sales, national agricultural and rural development policy provides increasingly important institutional support for this sector (see details and reference under policy chapter). Within direct sales, market selling is by far the most important revenue stream for farmers (Benedek et al., 2014).

The New Agricultural and Rural Development Strategy 2020, a high-level foresight document which is often regarded as a new constitution of rural Hungary, also promotes this enabling environment and renders proportionately much higher allocation of resources for LFSs and SFSCs than any previous high level policy (Balázs, 2012; Kneafsey et al., 2013). Top-down policy processes under the New Agricultural and Rural Development Strategy 2020 open a window of opportunity especially for bottom-up initiatives. In the European Union's new agricultural and rural development policy 2014-20, thematic (problem-focussed) sub-programmes within rural development programmes will be opened to further enhance the development of LFSs and SFSCs targeting specifically the small scale producers, alternative food systems, local certification schemes, local markets, small scale processing facilities, local food promotion, local added value creation, etc. (Kneafsey et al., 2013).

Main actors

The strongest actors of the agro-food sector are processors and traders with market advantage in comparison with farmers. Food retail controls the vertical food supply chains. Due to narrow margins and volatility, small-scale producers feel the most pressure and have the least power to influence food supply chains. With the sparing number and weakness of producer associations, individual farmers are normally in weak bargaining position and face enhanced price competition. Between producers and traders it is mostly reputation that plays a decisive role. Larger farmers' cooperatives (TÉSZ) could act as successful suppliers of large retail chains, which dominate the food retail market. Competitive pressures faced by agri-food producers in Hungary hinder the prospects of upscaling small scale agri-food innovations and the development of food quality (Fehér, 2002). In order to invest, producers often need to make use of their own funds because of the high cost of loans and the relative immaturity of the farm credit and crop insurance system, particularly in the small producer segment of the sector. Cooperation between SMEs in the agro-food industry is also hindered by a lack of trust, capital shortage and hostile feelings towards co-operatives and alliances in general. The latter is a residual effect of historic experience with forced cooperation during Hungary's communist period and perceptions about the value of cooperation change slowly, and as new needs and forms of truly voluntary cooperation emerge. From the consumers' point of view, in comparison with other EU Member States in Western Europe a very high level of total household income is spent on food (average circa 30%). At the same time, a higher proportion of the population – about one third - is taking an active part in food self-provisioning.

Low-carbon or biodiversity challenges/goals

The strategy also acknowledges low-carbon and biodiversity challenges and outlines national level goals for Hungary. It promotes the maintenance of agro-biodiversity in nature conservation areas through incentive systems and the implementation of payment schemes. It also envisions the revision and modification of support systems that clearly decrease agro-biodiversity. The strategy sets the target for increasing land use and areas that contribute to the maintenance of agricultural biodiversity from 500 thousand ha in 2010 to 1,2 million ha in 2020 (in AEP and Natura2000 areas).

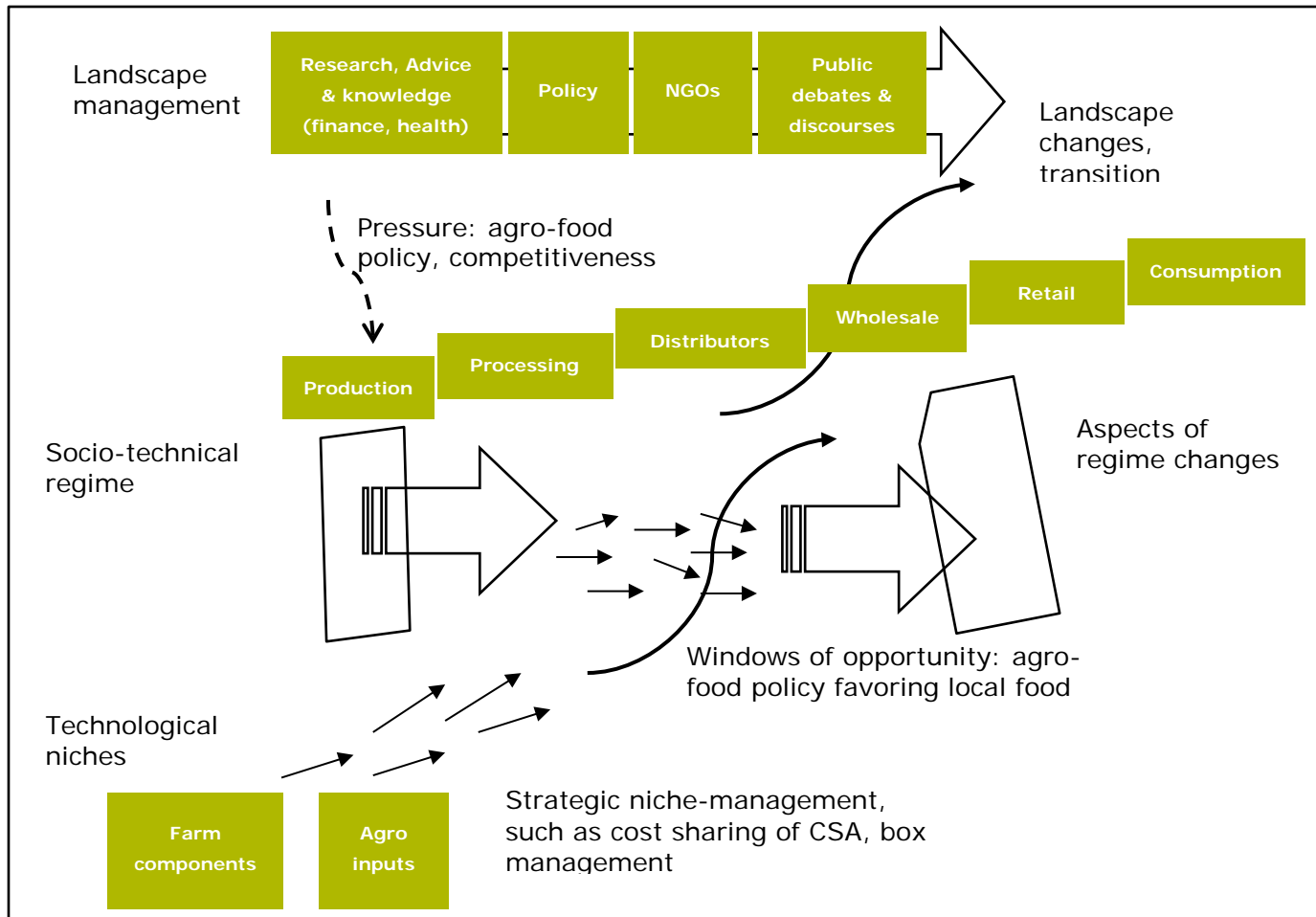


Figure 1: The agro-food sector with the main actors and developments

2. Case selection

2.1. List of potential green niche-innovations

Below some of the interesting innovations present in Hungary are described. Innovations in the Hungarian Agro-food domain are present in different sectors and vary in concreteness and impact.

Organic farming and consumption: favourable geographic conditions and high potential but on the country level a very low rate of organic production. Main stakeholders of the sector activated joint coordination.

Vegetarianism/Sustainable diet: this is not strength of Hungary, but has some potential. Recent trends in diet show that vegetarianism is gaining ground, but not in a major way.

Landraces and indigenous varieties: traditional crop, fruit or livestock varieties are showing a definite trend (in situ and ex situ conservation efforts) and this also has biodiversity implications. The using, planting and marketing of traditional breeds helps maintaining biodiversity (Bela et al 2006).

Food self-provisioning has long traditions and also surprisingly high level in Central Europe; in Hungary one-third of the total population is involved in food-self provisioning – definitely not only the poor. Recently the trend has been conceptualised as 'quiet sustainability'.

Farmers' Markets: through the example of model markets in Hungary (some also internationally well-known) quality insurance efforts could be recorded.

Agricultural Social Enterprise: social-ecological objectives integrated with a business approach for gaining transparency and traceability in the market of highest quality food products, for linking rural producers with urban consumers.

Agriculture supported communities: community-based agriculture cooperatives based on long-term partnership and risk-sharing between one or, in some instances, several innovative organic farmers and their consumers. Potential laboratories for catalysing social change in consumer-producer cooperation and regain citizens' control over food.

Organic Vegetable Box System: collaborative direct marketing enterprise between organic farms emerging after a decade of experimentation with direct marketing schemes in the Budapest area.

2.2. Selection of 4 main niche innovations

The following four cases of niche innovation have been selected to represent dedicated efforts by various actors (including businesses, NGOs and consumers) with different motivations (commercial, cultural) and knowledge forms combined. They also show examples of experimentations and learnings in the sector:

Organic farming and consumption has been selected to show the achievements and potential of the sector in contrast with other EU countries.

Vegetarianism/Sustainable diet: this is rather weak segment in Hungary but with increasing public interest; seems necessary for comparison.

Localised food systems/ food regionalisation: as recent trend this niche will be selected to show recent achievements of the Farmers' Markets and the Agricultural Social Enterprises.

Agriculture supported communities: several innovative organic farmers and their consumers are already gaining momentum. Community supported agriculture initiatives are potential laboratories for catalysing social change.

Table 1 - Niche innovations in Hungary

<p>1. Organic agriculture (including consumption / demand side)</p>	<p>Organic food is produced in a typical way (without artificial fertilizer and pesticides). A change of behaviour is necessary at the consumer side as well, to make them buy the products. <u>Main contribution:</u> Organic farming uses less/no artificial fertilizers/pesticides. Furthermore biodiversity is taken into account in production.</p>
<p>2. Vegetarianism / lowering meat consumption</p>	<p>Meat consumption puts a lot of pressure on ecosystems (land use and GHG emissions): a change in diet could reduce it. This is an example of a social innovation <u>Main contribution:</u> Producing meat has a big impact on GHG emissions and land use. A reduction of consumption leads to a reduction of GHG emissions and land use.</p>
<p>3. Localized food chains, regional food production</p>	<p>LFSs shape the food system in ways to minimise transport costs. Consumers mostly prefer local but it is hard to access without change in behaviour. <u>Main contribution:</u> local food production may use significantly less fertilizers/pesticides; it may also facilitate SFSCs and decrease food miles.</p>
<p>4. Community Supported Agriculture</p>	<p>CSA organise alternative food communities, and facilitate behaviour change of their customers/members. <u>Main contribution:</u> CSA farms often avoid artificial fertilizers/pesticides although they are not certified as organic. Maintaining local agro-biodiversity, landraces is a primary principle of production.</p>

The followings have not been selected:

Landraces and indigenous varieties: although a definite trend it is not found appropriate for comparison.

Food self-provisioning: a relatively new interest of academics but lacks comparability and probably innovation element.

Organic Vegetable Box System: as a collaborative direct marketing initiative can be incorporated in the chosen niches as an example.

For Hungary 4 cases are studied as the researchers found it most important in order to make a comparison in later phases of the research, to study similar cases in Portugal, Hungary and the Netherlands.

3. Analysis of momentum of 4 niche innovations

3.1. Organic Agriculture

The history of the organic farming sector in Hungary is one of resiliency and perseverance. The foundations were laid during some of the most structurally traumatic times within the greater agricultural sector in Hungary, and its existence today, although marginal within the national agricultural profile, is a testament to growers who have remained true to their ecologically driven ideals. The contemporary organic agriculture movement in Hungary presents a distinction between “institutionalized” certified organic producers and “informal” ecologically conscious producers. Both groups, with greater influence on smaller scale producers, serve an integral role in the development of localized food networks which drive domestic consumption of organically produced products and serve as a life line for small scale organic producers. Organic growers serve as the backbones of most local food initiatives, often playing a multifaceted role as provider, advocate, manager, and communication facilitator (Balázs 2012). Since the birth of the organic sector in Hungary over three decades ago, the same pressures which were experienced by conventional agriculturalists after the socialist transition period (self-sufficiency in a liberal market, domestic sales challenges, immature processing industry, and exclusion) have plagued the organic sector and slowed its development (Drexler & Dezsény 2013, Strenchock 2012).

3.1.1. Innovation and market trajectory

The roots of the organic agricultural sector in Hungary sprouted in the early 1980s and began with a loosely associated club of ecologically conscious, small scale gardeners, environmentalists, and natural medicine advocates who shared interest in chemical free agriculture and family health (Torjussen et al. 2004). The grassroots interest in ecological farming was legitimized when Hungary became Central and Eastern Europe’s first International Federation of Organic Agriculture Movements (IFOAM) sanctioned member. Important highlights of the timeline of development of organics in Hungary include:

1983: Biokultura Klub, organic agriculture enthusiasts club established in Hungary

1987: Biokultura Klub transitions into Biokultura National Association, becomes first IFOAM registered member from Central and Eastern Europe

1996: Biokontroll Hungaria Kft established, first domestic organic inspection and certification agency in Hungary

1996-2004: Persistent growth in overall amount of organically farmed land in Hungary, number of registered organic operations

2004: EU Accession impacts agriculture sector in Hungary, five year decline in organically farmed land

2007-2013: New Hungary Rural Development Program dictates agri-environmental support mechanisms

2009: Officially certified organically managed land coverage peaks at over 140,000 hectares, followed by decline in ensuing years

2011: The Hungarian Research Institute of Organic Agriculture (OMKi) is established

2012: New Hungarian National Rural Strategy prioritizes growth in organically farmed land in Hungary, sets target of 300,000 organically farmed hectares for 2020 (IFOAM 2012, Torjussen et al. 2004, Solti 2012, Willer et. al 2013)

Organic Production Profile of Hungary: 1998-2010					
Year	Number of Farms	% inc. from previous year	Organically farmed hectares	% inc. from previous year	% total HU agricultural land
1998	401	249	22501	17	0.4
1999	475	18	35979	60	0.6
2000	762	60	53649	49	0.9
2001	1119	47	79178	48	1.4
2002	1517	36	103700	31	1.8
2003	1775	17	116535	12	2.0
2004	1842	4	133009	14	2.3
2005	1935	5	128576	-3	2.2
2006	1974	2	122766	-5	2.1
2007	2024	3	122270	0	2.1
2008	2066	2	122817	0	2.1
2009	2292	11	145942	19	2.3
2010	2062	-10	130717	-10	2.2
2011	1961	-5	130343	-0.3	2.2

Figure 2: Organic Production Profile of Hungary (Willer et. al 2013, Solti 2012, Eurostat Data)

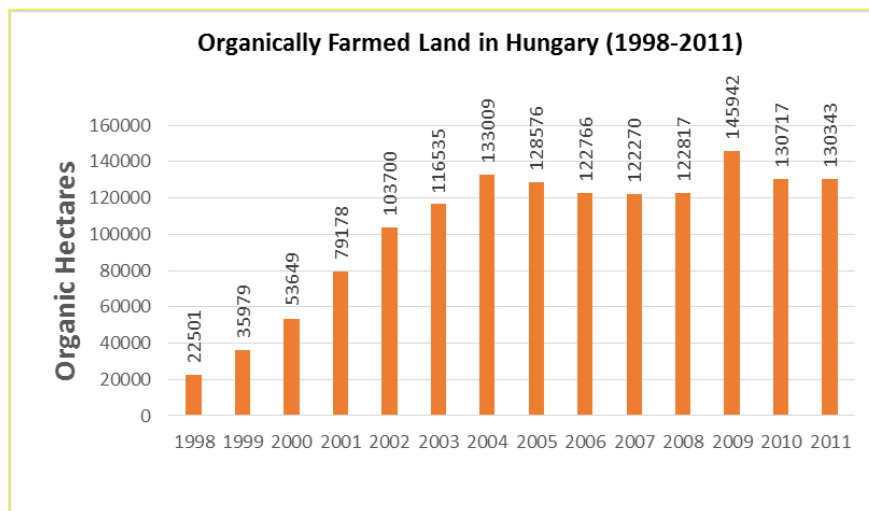


Figure 3: Organically Farmed Land in Hungary (Solti 2012, Eurostat Data Compilation)

Organic agriculture in Hungary was birthed by pioneer enthusiasts in the 1980s, supported by the positive outlook of prospecting growers during its decade long growth period from 1995-2005, and has been kept alive by the dedicated during the stagnation which has persisted (Solti 2012). For the first decade-and-a-half of certified organic production in Hungary, the most important outlets for Hungarian organic goods in Europe included Germany (receiving 40% of all products) Austria (25%), Switzerland (20%), and Holland (10%); a distribution pattern which persists to present day (Torjussen et al. 2004). This market reality has had repercussions; while foreign demand for raw organic commodities initially sparked the spread of organic production, a corresponding increase in domestic consumption has never accompanied this trend, consequentially handcuffing Hungarian organic producers to high risk, low reward export-driven production, only feasible for large producers specializing in raw commodity production. In a five year data comparison of countries within the Carpathian Basin, Hungary's share of organically farmed land has increased the least in comparison to seven countries (Figure 3, Solti 2012). It is estimated that 85% of total organic production is exported to foreign markets, and that of the €25 million in organic production value within the Hungarian economy, about €20 million is gained through exporting (Drexler & Dezsényi 2013).

Organically farmed land in Carpathian Basin Countries: 2004-2011										
Country	Year and organically farmed hectares								Changes 2004-2011	
	2004	2005	2006	2007	2008	2009	2010	2011	hectares gained	% increase
Serbia	542	n/a	740	830	4494	8661	8661	8635	8093	1493.2
Croatia	2853	3124	6145	7561	10010	14194	23352	n/a	20499	718.5
Slovakia	53801	90296	120417	117906	140755	145490	174471	166700	112899	209.8
Romania	73800	92770	107578	131401	140132	168288	182706	229946	156146	211.6
Austria	344916	479216	477472	481636	491825	518757	543605	536877	191961	55.7
Slovenia	23032	23499	26831	29322	29838	29388	30696	32149	9117	39.6
Ukraine	240000	241980	242034	249872	269984	270193	270226	270320	30320	12.6
Hungary	133009	128576	122766	122270	122817	145942	132626	130343	-2666	-2.0

Figure 4: Organically farmed land in Carpathian Basin Countries (Solti 2012, Eurostat Data Compilation)

3.1.2. Actors and social networks (socio-cognitive)

The main social actors working to promote organic farming and the consumption of domestically produced organic products include:

- **Biokultura Alliance:** national organic agriculture advocacy and promotion organization; www.biokultura.org
 - **Biokontroll Kft and Ökogarancia Kft:** certified organic inspection and certification bodies; www.biokontroll.hu www.okogarancia.hu
 - **TVE, Association of Conscious Consumers:** smart consumption advocacy group based in Budapest; www.tve.hu
 - **Hungarian Research Institute of Organic Agriculture (ÖMKi):** Research institute and responsible for organizing on farm learning, exchange, and professional development programs; www.omki.org
 - **KÖSZ:** Carpathian basin based organic farmers' association; www.karpatbio.hu
 - **MÖSZ:** Association of Hungarian Organic Farmers; www.hunorgfarm.hu
- (Summary compilation: Solti 2012, IFOAM 2012)

Hungarian organic producers, conscious consumption advocates, and agricultural scholars attest that the most pressing issues within the domestic organic sector include (Drexler & Dezsényi 2013, Willer et. al 2013, Solti 2012, Strenchock 2012):

- Continuing marginalization of Hungarian organically produced fresh and processed products within the EU market
- Reliance on exporting for sales, vulnerability and inherent weakness within the raw-commodity, low value added export market
- Lack of capability of the domestic organic processing industry
- Saturation of foreign organic imports in the most popular domestic food retail chains, low recognition of Hungarian organics in the domestic market
- Difficulty in meeting the price, supply regularity, volume and aesthetic standards to access retail space in conventional chains
- Lack of consumer understanding of the difference between organic and conventional products
- Weak representation in the political sphere, ineffective policy interventions
- Disproportionate reliance on direct sales markets and demand in urban locations for sales
- Lack of creativity in promotion of domestically produced organics

Domestic demand for formally certified organic products has not yet risen to a level which has encouraged growth in the sector; a problem that is escalated by a lack of easy access to fresh organic products in conventional retail settings (Drexler & Dezsényi 2013). While the majority of Hungarian organic production is exported (85%), it is also estimated that of the organics purchased in Hungary, 90% are processed imported products (Drexler & Dezsényi 2013). This contradiction outlines the difficulty consumers

have in purchasing domestically produced certified organic fruits, vegetables, meats and dairy products in the retail locations they frequent most often.

The increasing impact of large corporate retail chains in the Hungarian food market has had major repercussions on the purchasing patterns of consumers, as well as the distribution stream of Hungarian products (Csaki and Jambor 2009). At the beginning of the new millennium and at an increasing rate after EU accession, power and influence within the Hungarian food retail market was captured by corporate retail chains and global food traders. In a short period not only was the landscape of the food retail scene completely changed, but also the consumption patterns of Hungarian citizens. This usurping of control of the food market in Hungary, and its corresponding influence on consumer shopping patterns had repercussions on both the conventional and organic production sectors in Hungary. Campaigns encouraging the consumption of Hungarian products, including the labelling of products produced in and containing domestically produced ingredients have been in existence for years, but specific programs for marketing domestically produced organics have not been implemented effectively.

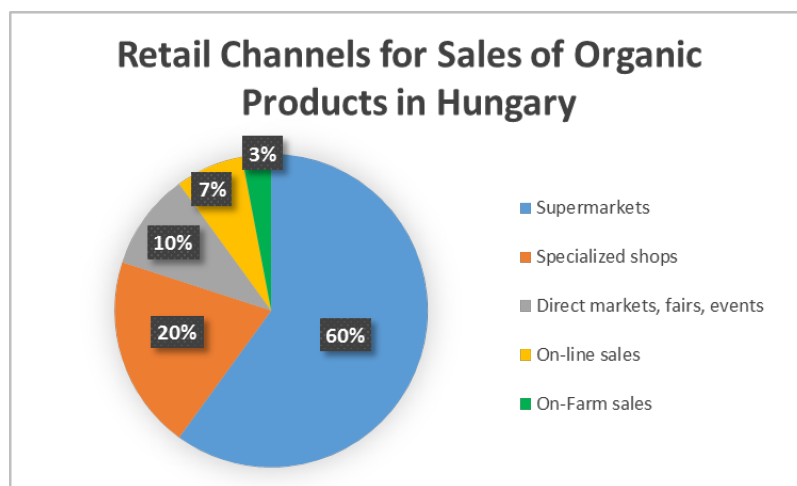


Figure 5: Retail channels (Chart created from data sourced from Frühwald 2012)

Consumer interest in organic foods in Hungary is driven by the perceived health benefits associated with consuming goods free of chemical additives and pesticide residue. On a secondary level, solidarity with local producers, and the associated environmental benefits also drive sales. A summary of four common Hungarian organic consumer profiles include (Drexler & Dezsény 2013, Strenchock 2012):

- **Health Conscious:** Consumers who identify with the health benefits associated with products that have been produced without harmful pesticides and chemicals, conscious eaters because of ill health or disease, and those who prioritize fresh and minimally processed products, along with supplements and vitamin rich foods
- **Young Families:** Consumers who have recently had children and have become more health conscious as a result of this. Young mothers have been cited as one of the largest groups of organic and locally produced food consumers in Hungary
- **Motivated by Trust:** Consumers who are pacified with the knowledge of who has produced food items they consume and where they have originated, consumers who may also be motivated by knowing and supporting the individual who has produced their food as opposed to supporting a faceless corporation or distant producer
- **Environmentally Conscious:** Consumers who are motivated by the positive environmental and sustainability attributes of locally or organically produced food. A

relatively small, but growing section of the Hungarian population, currently defined as mostly urban dwellers with a higher level of education than average

It has been estimated that less than one percent of total average Hungarian household expenditures on food are used to procure organic products, and that Hungarian consumers have high food price sensitivity, a commonly shared feature of Central and European Countries (Balázs - Szabadkai - Pálházy 2010; Lehota 2012). The current annual expenditure on organic products per person in Hungary is just €2.5/person/year (Willer et. al 2013). The main obstacles for growth in domestic consumption of organics in Hungary have been cited as: low consumer demand; a limited capacity and willingness to pay price premiums for organics; the limited availability of organic products; and a lack of consumer confidence in organic certification (Drexler & Dezsény 2013).

3.1.3. Institutions, Governance and Policy

In the last decade, the organic movement has become important in framing an image for agricultural transition and a dedication to ecologically sensitive land management in Hungary. In the early 2000s, the newly drafted Hungarian Agri-Environmental Program prioritized incentives for sustainable development in the agricultural sector. Following this, the two most recent incarnations of national rural development strategies (New Rural Development Program 2007-2013, New Hungarian National Rural Strategy 2014-2020) have contained extensive language in support of agricultural land management practices with positive ecosystem benefits, and to a lesser, but present extent, direct mentioning of the promotion of organics in a separate National Organic Farming Action Plan. The success of both the New Hungarian Rural Strategy and National Organic Farming Action Plan are directly tied to EU sanctioned Agri-Environmental support programs within the greater Common Agricultural Policy (CAP), and the ability of the Hungarian government to overcome a track record of barriers to the effective implementation of strongly worded policy documents. Ambitious sounding, but sparsely implemented strategies, with little impact on the plight of most organic producers and small scale producers in particular, have not provided functional incentive to encourage organic conversions or development in the sector to date. Direct farmer support programs have the reputation of being uninventive, incredibly bureaucratic, and difficult or impossible to manage for smaller farming operations, while favouring larger farming operations who have been the benefactors of past programs. Additionally, marketing and promotional programs which make a distinction for the value of Hungarian organic products have not materialized as a priority within top-down support schemes.

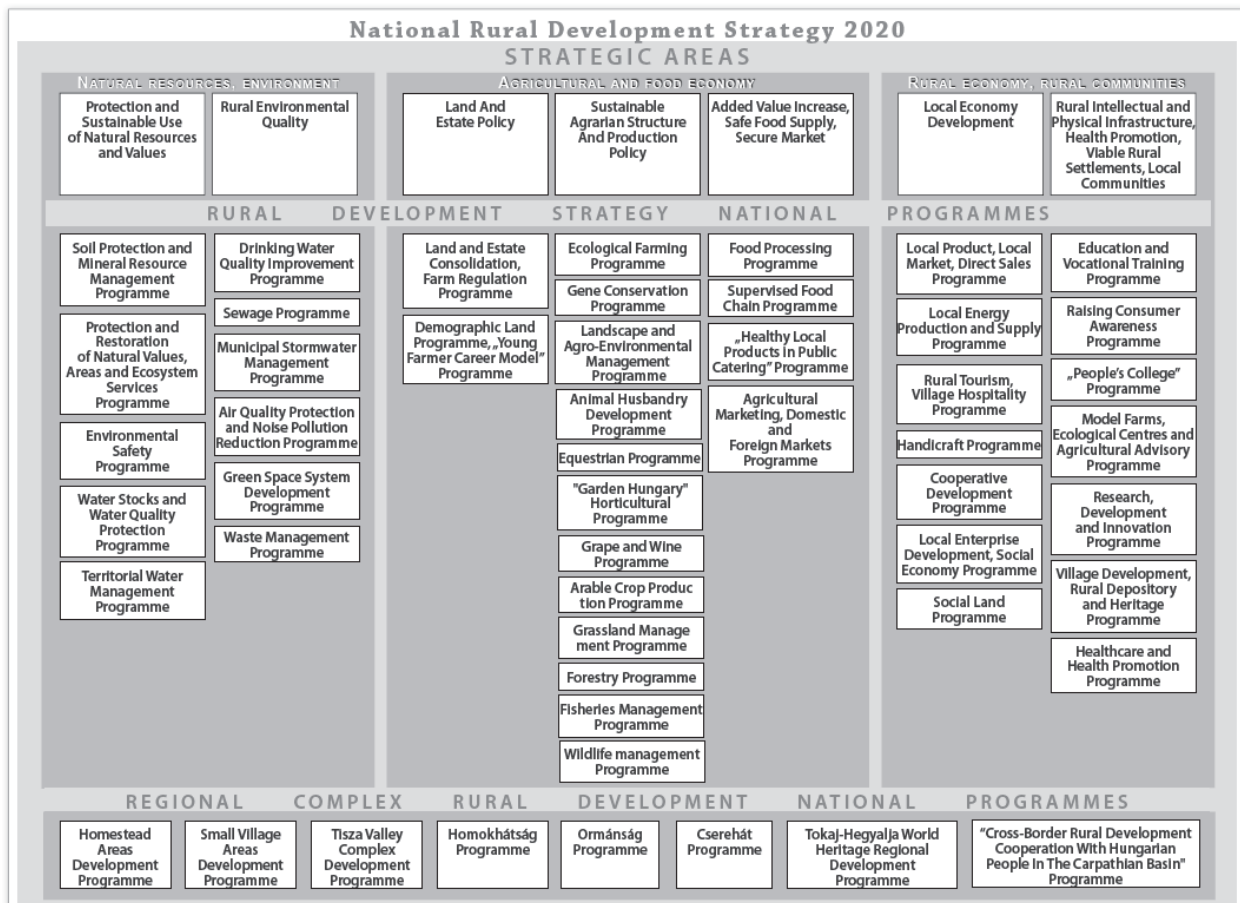


Figure 6: Strategic Areas, New Hungarian National Rural Development Strategy 2020 (Image credit: Hungarian Ministry of Rural Development, 2012)

3.1.4. Summary and Future Outlook

The reality of organic farming in Hungary is that overall momentum of the movement is low, but in spite of this, the outlook is likely greater now than any point within the last decade. Innovative cooperation between organic growers, consumers and sustainable agriculture advocates (from the public and government sector) have provided a glimmer of hope in any otherwise discouraging field. Additionally, as a member state admitted to the EU in 2004, 2013 was the first year in which the agricultural sector received full subsidy support within the CAP program³. It is expected that gaining the full benefits EU support which is shifting to prioritizing ecological farming will give the organics sector in Hungary a much needed boost.

As new partnerships continue to develop a means for increasing access to domestically produced organic products for consumers, progress must be matched with the continued maturation of national policy initiatives which aid in disseminating knowledge regarding organic production practices and land conversion techniques. Hungarian organic production capacity and domestic demand for organic products are linked symbiotically and mutually beneficial to each other; and advocacy for both is complimentary. Key steps which would have great impact on the growth prospects of the organic sector in Hungary include (Drexler & Dezsényi 2013, Strenchock 2012, Solti 2012, Willer et. al 2013):

- continuing support for research projects which focus on regionally specific innovations in organic growing

³ In Hungary the average rural development subsidy (standardised for one hectare) is 98 €, which is above the average EU level (82 €/ha) – the national top-up is 25 percent.

- investment in the development of domestic processing capacity required for the legal processing of organics (i.e. growth in processing infrastructure specifically for certified organic products)
- support programs which help increase cooperation between growers, policy makers, certifying bodies and advocacy groups
- continued encouragement for community supported food initiatives, and development of localized food processing and distribution networks
- advocacy and distinct, effective promotion of domestically produced organic products, marketing of the Hungarian and EU organic produce labels and their meaning
- flexible and simplified national support for on-farm educational programs which increase knowledge of organic growing techniques
- increased acknowledgement of the role organic production plays in strengthening the greater agricultural sector in Hungary

3.2. Vegetarianism/lowering meat consumption

A survey of the state of Hungarian vegetarianism can only be realised with a complex view. Mainstream culture, the attitude of the civil and public sphere and the varied approach of different social layers towards eco-sensitive and conscious ways of consumption are all important factors in framing a larger perspective. This study aims to shed lights on problems and positive phenomena that can be crucial to accurately framing the developments impacting the popularity of meatless diets in Hungary.

3.2.1. Innovation and market trajectory

A historical perspective

The first era of vegetarianism began in 1883 with the foundation of Hungarian Vegetarian Society (Kökény 2009). The aim of the foundation was to promote a meatless lifestyle mainly with the help of the press. The most famous vegetarian of the first decades of 20th century was Béla Bicsérdy (his followers were called "the Bicsérdies") who emphasized the importance of eating raw food based on his own personal philosophy. Similar initiatives from the era (as the earliest vegetarian niche innovation) include the meatless dietary pension of István Rusznyák and the vegetarian community of dr. Arnold Antolik in the 1930s. Socialism put an end to the operation of these organisations. The Hungarian Vegetarian Society was dissolved in 1951. The next wave began before the change of regime in 1985, by the publishing of Dr. Andor Oláh's and Klára Kállai's book, *Reformkonyha* (Reform kitchen). Vegetarianism, as a dietary remedy started to gain momentum again, along with natural medicine (Olah et al., 1991). Throughout the following years vegetarianism gained an ever growing number of followers and a market base.

Today patterns in Hungarian society follow Western-European and North-American trends with a slight delay in growth, and lag in promotion of the dietary option. The number of people choosing a meatless diet is slowly growing. According to the European Health Interview Survey' data of 2009, 0,84 per cent of Hungarians are vegetarian; meaning there are about 83,000 people who are not eating meat (KSH 2011). Among them, vegetarianism is mainly a characteristic of citizens who belong to younger generations with a higher level of education (women twice as often as men). Their motivations include religious beliefs and spirituality, health-concerns, care for the ecological benefits of the diet and for morality reasons concerning the welfare of animals. However, the division of these groups is quite varying and helps identify opportunities for growth and promotion of ventures in the field of meatless diets. For 27 percent of vegetarians

participating in the survey, both moral and health issues played an important role. 48 percent referred to moral reasons while the rest (25%) stopped eating meat for the sake of their health. Among those who became vegetarians for moral reasons, 36 % belonged to a denomination and referred to religious reasons, while 64 % cited moral issues such as ill-treatment to animals, the cruelty of slaughterhouses, some unpleasant direct personal experience or for the protection of nature. 28 % of vegetarians who chose meatless diets due to health issues were motivated by having some kind of diagnosed illness. According to statistics produced by Central Statistical Office, meat consumption per capita in Hungary dropped significantly compared to observed patterns in the 1980s (KSH 2012). According to research, recession and economic challenges are the main drivers for this change, and not increasing interest in conscious forms of nutrition.

3.2.2. Actors and social networks (socio-cognitive)

Despite these facts, interest in 'reform eating' is growing. Based on the logic of supply and demand there is a growing need for a meatless diet. The slight expansions in vegetarianism helped create a niche market of organic and healthy food stores and web shops. At the supply side some of the supermarket chains (Spar, Aldi, DM, Lidl, Auchan) recognised the gap and by assessing local needs began to provide more products typical in vegetarian diets and accepted these as meat substitutes. A further sign of economic potential is the fact that the bulk of these products are made in Hungary, often by small enterprises or family firms. The best example is the Biopont brand which was founded in 1996 and has been expanding ever since. The present situation is also favourable for importers of foreign products. Since 2002, the average annual income of ISH Magyarország Ltd., distributor of 'The Bridge' plant milk and dairy products has been estimated to have grown by 40-60 %.

In line with this, the strengthening of another sector, namely vegetarian restaurants is observable. Initially, their establishment was connected to religious movements and most of the restaurants were established in Budapest including: Govinda Restaurant - Krishna Movement (1996), Édeni Vegán - Adventists (2006), Atma Center - Buddhists (2005, 2014), Napfényes Étterem - an independent spiritual community (2009). Since 2007, several bicycle messenger networks delivering vegetarian food were founded that cover the whole capital and some larger towns in the countryside e.g., Vegafutár (2007), VegaFood (2010) and Vegalife (2012). There are other services specialized on the vegetarian diet, including several patisseries and bakeries belonging to the owners of ventures listed above. MagNet Hungarian Community Bank is a unique initiative that sees potential in vegan nutrition and lifestyle as an element in its marketing strategy. The credit strategy of their first community deposit product 'Sphere' was formed along ideologies close to vegetarianism, mainly on the fields of organic farming, green energy, conservation, job creation and health care.

NGO sector

The Eco-farm at Somogyvámos, project of a Hungarian Krishna Community is the most stable and most successful example of local vegetarian niche innovations. The NGO, Ök völgy Alapítvány az Alkalmazott Fenntarthatóságért (Eco-valley Foundation for Applied Sustainability) which runs the farm was founded in 2008, and became the member of European and national Eco Village associations and the only Hungarian member of the European Vegetarian Association, respectively. The Foundation emphasizes the need for changing lifestyle in order to tackle climate change, halt environment pollution, and food crisis. Zoltán Hosszú, head and co-founder of the Foundation reported a successful project in which eco-farms were established using the resources of governmental public work programs in Somogyvámos and neighbouring settlements. Participants of the project learned vegetable gardening and grew vegetables for the community in a self-sufficient manner.

Although there are similar initiatives operating temporarily in Hungary, based on a more thorough examination of the NGO sector we can conclude that protection of animal

rights, ecologically sensitive attitude and vegetarianism have not become interconnected on organizational level.

3.2.3. Institutions, Governance and Policy

The slow, independent growth of vegetarianism in Hungarian society mirrors the corresponding policy context. Even though rural development itself and organic farming in particular appear – at least at the level of official communication – to be high priority, efforts to promote vegetarianism and to connect it with sustainable development are not visible. This is illustrated by several policy measures still in force. For instance, subsidies available under the Young Farmer program are paid only to those who practice mixed farming, while those who only grow crops are not eligible. A similar preference for a meat-based diet is illustrated by the intention to reduce the VAT on pork, poultry, cattle and lamb. Policy frameworks of this orientation indicate that the role of meat as basic foodstuff is considered vital above all.

It is also indicative, that there is no coherent programme to introduce vegetarianism in public administration. A significant and constituent obstacle in this framework is the regulating decree on health, diet and nutrition in mass catering, indicating that *„Every main meal should contain sources of protein of animal origin, let it even be a small meal in case of nurseries.“*

Cultural context – hindering factors

The expansion rate of vegetarianism in the food sector cannot easily be measured in light of statistical data. It gains only solid ground typically in the circle of young urban intellectuals. Unfortunately, this data is almost invisible from the perspective of the broader public. Consequently, the phenomenon of a meat-free diet should be addressed from this broader perspective, in order to point out cultural obstacles in the way of the socio-economic leverage points of *niche innovations*. What are these socio-cultural motives and practices supporting and hindering the proliferation of a meat-free diet? To be able to understand that, it is necessary to gain an understanding of the symbolic position of meat in Hungarian nutrition culture.

Meat should still be considered as the central part of the ‘traditional’ local culture: an indispensable element of main dishes. In traditions - and also in everyday practices - of mass culture, meat is tightly associated with the attributes of power, with the meanings of men and richness.

The voluntary abandonment of such powerful sources of identification is generally far beyond the meat-eater majority, even if the knowledge of negative impacts of voracious meat-eating are inherent parts of a general common understanding. Meat is normally regarded as a foodstuff of higher prestige, compared to vegetable dishes, reinforcing its association with material richness. Meat dishes are moreover central parts of family gatherings and other great social events: ‘Sunday-lunches’, community events and festivities are unimaginable without them.

In the public discourse on healthy food someone following a meat-free diet could easily be identified with being in poverty or poor health standing and looked down upon. The opposite might be also true in an Haute cuisine style, as a vegetarian option is also often considered a luxury or gourmet choice. The – even only temporal – avoidance of meat in the main courses might be interpreted as self-denial, general deficit, or even feminine in behaviour in several social discourses.

‘Hungarian’, as a national character (a populist ideology penetrating the scene since the change of system) appears through food as well. Dishes considered as ‘traditional Hungarian’ (gulyás, pörkölt, stuffed cabbage) are typically made of meat. Emblematic meat products like bacon, sausage and hurka (blood-sausage) are part of a resurging national tradition. ‘Hungarikum’ products (cornerstones of the Hungarian culture)

impregnated in the national character are also mostly meat products, such as goose-liver, salami and different smoked sausages.

The rural tradition of ceremonial pig slaughter has become part of domestic tourism in the last years - appearing in a romanticised picture of cultural heritage conservation⁴. The Pig Slaughter Sausage Festival in Békéscsaba is one of the biggest events in Hungarian gastronomy. Acknowledging its volume and its symbolic importance, Hungary's conservative minister president is a regular guest of the festival, reinforcing the majestic role of sausage within the realm of culture and national character. Anyone taking a critical stance against pig slaughter, sausage-filling and goose-stuffing from a moral or ideological point of view, „*is ruining the traditional national culture and national self-image*”. Due to this wide-spread mentality in society, it is hardly assumed that vegetarianism will conquer greater space in the near future in Hungary.

3.2.4. Summary

It may be stated, that the circle of followers of vegetarian eating habits is constantly broadening. However, the situation of the niche-innovation-type enterprises is in challenging contrast. We can definitely predict a broadening niche-market and a positive vision. However, in the macro thematic of alimentation-culture and the in the domain of public administration there are clear counterproductive tendencies taking place. The main drivers and motivations behind vegetarianism are also areas of high importance, indicating directions for enterprises that are ready to play a role of innovator in this niche market. Initiatives covering the vegetarian market segment could only be successful if they are able to have a deep impact on the health conscious (i.e. not exclusively vegetarian, but also 'bio' and 'reform' minded) people. Restaurants and food-delivery enterprises serving the other three main target groups (being vegetarian for religious, moral or environmental considerations) may also be successful, but their predictable market share growth is fairly limited.

3.3. Localized food chains/regional food production

3.3.1. Innovation and market trajectory

Local food production and localized food supply chains, often referred as food relocalisation, have recently become the focus of attention among consumers, various NGOs, producers, as well as policy makers (Balázs 2012, Benedek - Balázs 2014). These systems have a long tradition in the United States and in Western Europe, and they also have deep historic roots in Hungary, even if the tradition was dented by the rapid shift to factory farming first in the country's socialist era and then during the large scale commercialization of the food chain by multinationals after 1989. Recent research has recorded a renewed interest in local food in Hungary (Benedek - Balázs 2014). The two terms, regional and local food systems, are often used interchangeably (Kneafsey 2010). The term Short Food Supply Chain (SFSC) covers a wide range of distribution channels and is considered to be more appropriate when it comes to empirical research. In SFSCs small geographical, social and cultural distance between producers is typical; such as the demand for environmentally friendly/conscious production and consumption patterns. Local food systems and short food supply chains are considered to be more climate-

⁴ In 2010 a new decree planned to restrict this activity by enforcing a hygienic check but it was never meant to make pig slaughter illegal. Small producers who raise pigs and also trade swine need to organise this activity through a slaughter house and gain the certificate of the vet. It is only trading that is illegal without vet certification.

friendly due to a smaller carbon footprint related to transport (ENRD 2012). However life cycle analyses show ambiguous results pointing out that reduction of environmental impacts is dependent on production and processing methods, as well as on logistical arrangements (Kneafsey et al. 2013).

Local food production and localized food chains (or SFSCs), can be regarded as alternatives to (1) industrialized food production of huge agro-businesses as well as to (2) global or nation-wide supply chains (or the mixture of these two).

Tendencies towards food relocalisation are influenced by a combination of motives (Kneafsey et al. 2013):

A. Dominance of intensive agricultural techniques, combined with the globalization of processing and trade industries are among the main causes of the accelerating impoverishment of (agri)cultural landscapes. **Small-scale local agro-enterprises typically have limited or no possibilities and/or capacities to become significant actors in modern food supply chains** (Lányi-Farkas, 2013; Lányi et al, 2013; Bertényi et. al. 2014). This tendency has been reinforced by the one-track subsidy schemes of CAP, the questionable priorities of rural development funds, as well as the low level of self-organizing and self-promoting capacity of small-scale local farmers. The consequence is a very low level of resilience and adaptability that drives the rural regions into a vicious circle finally unmanageable for local municipalities. In this sense, enhancement of SFSCs as real alternatives should be considered as means of sustainable rural development.

B. Global-scale environmental and economic crises undermine even the mid-term sustainability of the industrialized, energy- and chemicals-intensive agriculture which the European (and thus Hungarian) food-security is based upon. A number of studies investigating global food supply/food security possibilities of future generations conclude with the statement that a **'viable food future' will depend on the number and viability of small-scale, family and/or community-based food production schemes** (Nærstad, 2010; Van Ittersum et al, 2013; United Nations General Assembly, 2014).

C. **Increasing interest and a conscious claim for healthy, verifiable food products and for transparent supply chains.** Products of small-scale producers are generally considered to taste better, be more nutritious and fresh, healthier, more reliable, and authentic, often despite not having any quality (eco, organic) or regional labels. A Eurobarometer publication from 2011 recorded high support of local products in all EU countries: pointing out that half of EU citizens 'totally agree' that there are benefits to buying local food (Eurobarometer 2011). Eurobarometer data also show that citizens are interested in food security issues, and an especially high portion of them in chemical content but few of them think they would be able to recognize and avoid exposure to toxics. Europeans indicate higher trust in farmers than the food supply in major supermarkets (in Hungary about 70% trust more in farmers, compared to 30% in stores), and prioritize the origin of food, and about 75% regularly check product labels.

Environmentally conscious, small or medium-scale local food production, using preferably indigenous, traditional varieties and localized food distribution are considered to be a key leverage point to intervene the existing system, and consequently, minor niche innovations might deliver longer term solution to all three challenges above.

3.3.2. Actors and social networks (socio-cognitive)

Alternative food supply models are rather heterogeneous, keeping with the different socio-cultural, health, ecological, etc. expectations. Following the traditional grouping by Renting *et al* (2013)., Benedek gives an overview of different models and ways of SFSCs sorted here by their spatial dimension (Benedek 2014).

Table 2 – SFSC models sorted here by their spatial dimension (Benedek 2014, based on Renting et al, 2003.)

Direct/local sales	Community (marketing)-based <i>quasi</i> local distribution	Extended SFSCs, global distribution
Farmers' markets*	Farmers' co-operatives' shops	Local specialties; protection of origin
Roadside sales	Distribution to local restaurants	Quality assurance systems
Yard/garage sales	Public sector catering	Brands, trade marks
Pick-Your-Own	Thematic routes (wine, cheese...)	
Kitchen Table	CSA – <i>see in separate chapter</i>	
Web shops*	Festivals	
Shipping*	Regional products	
Box scheme (shopping communities)*	Agricultural social enterprises*	

If the aim of this exercise is to identify the most vigorous niche innovations in the agro-food domain, then alternative supply chains/models relevant to Hungary must be evaluated against factors that describe the long-term sustainability of the alternatives, such as commitment/sacrifice required from 'managers of the network'/farmers/customers; volume/participant thresholds; development prospects; economic/financial sustainability and ability to be integrated with existing supply systems.

Without being exhaustive, Hungarian alternatives distribution channels include ***ad hoc* distribution events** – focusing on seasonally available and limited varieties of products; various arrangements of **box schemes/shopping communities** (with usually 20-30 farmers and probably few hundreds of regular customers); **websites** providing access to local products and producers; **web shops** of local/farmers products (termelotol.hu; naturhalo.hu; kamratura.hu; 30km.hu; egyhazaji.hu).

These alternatives require considerable efforts from producers and customers, but even more from the managers of the systems, who in many cases work on a voluntary basis. Thus, the systems often struggle with survival and continuity. Also, due to periodic changes in purchasing patterns of consumers, or in seasonal fluctuations in production capacity from producers there is an inherent risk of imbalance within developing alternatives. It is hard to assess, the potential of these systems to become real alternatives of 'modern' food supply chains, or to think of them in a competitive mode. Even though some have been operating for as long as 15 years, they have rather limited geographic or social coverage.

Farmers' markets are the most frequent alternative distribution channels in Hungary with almost 200 all over the country and attracting the highest numbers of customers (Juhász, 2013). Similarly to other direct distribution schemes, farmers' markets have multiple effects on communities; apart from the primary economic function of trading goods, markets have significant social benefits such as strengthening trust, local identity and human relationships. In the last 5 years, farmers' markets have had their renaissance in Hungary. The number of markets has been rapidly growing – especially in the capital of Budapest and in larger rural cities despite the fact that the national total of markets/fairs has dropped by 28% in the last decade, (Szabó, D., Juhász, A – 2013) especially in the countryside due mainly to the penetration of supermarket chains. The establishment of Farmers' markets has become its own 'movement' and generated a competitive rush among NGOs, banks, municipalities, churches and even the

Government itself. Last year the Ministry of Rural Development (since 2014 the Ministry of Agriculture) announced the 'Farmers' market to every settlement' initiative that clearly shows the momentum around the topic (Hungarian Ministry of Rural Development, 2014).

In the eyes of the government, farmers markets would demonstrate the richness, diversity and authenticity of the Hungarian countryside and they are matters of national pride. The legal background has been changing somewhat favourably to pave the way for the creation and operation of farmers' markets. The establishment of these distribution and social events became a political issue.

However, the economic sustainability of farmers' markets is still a pending question. Main concerns/challenges about their operation are:

- How to ensure the simultaneous presence of the four key components of a farmers' market, namely: critical number of prepared and verifiable producers; critical diversity of quality products; critical mass of customers with significant purchasing power; and – in some cases – reliable producers, and those who are willing to operate transparently;
- How to operate farmers' markets as a commercially viable enterprise, without regular external financing and volunteer work;
- How much farmers' markets increase the development prospects of small-scale farmers.

Experiences of organizing and managing farmers' markets show that because of the challenges associated with maintaining markets; i.e. ensuring production volume, pricing, and need for continuous quality assurance, today's farmers' markets can hardly be operated in a financially sustainable way for the managers, and despite their increasing number and coverage, and because of high competition and costs incurred, provide limited opportunities for producers to grow/develop their production capacities. (Szalai and Bertényi *pers. comm.*; Juhász, 2013.). In other words, most of the gain obtained from shortening supply chain is challenged by the increasing financial and human resources required (marketing, travel, compliance with legislation).

Agri-social Enterprises are new attempts of operating SFSCs in Hungary in order to cope with the challenges mentioned. Social enterprises have well-defined community and environmental objectives but use a business approach to achieve these objectives, eliminating volunteer work. The essence of the model is to build a one-step transparent link between high-quality raw food products of small-scale producers and the purchasing power of cities: products are collected from producers in rural areas, and processed and served by an enterprise group to urban consumers. Products are selected based on quality, but also based on environmental and social criteria, thus each product carries an inherent aspect of rural sustainability that consumers also pay for. Full transparency of food chains is also a key element: behind all the ingredients are real producers who assume responsibility for their farming methods and products. Credibility and transparency is guaranteed by an independent certification system. The enterprise assumes the tasks of marketing, product development and sale from the farmers and also works on gaining and maintaining the trust of the consumers. The model has the advantage of much higher volume thresholds – challenging the production capacity of small-scale producers in relatively large regions.

3.3.3. Institutions, Governance and Policy

Policy reform initiatives channelled by the local food movement in Hungary reached a window of opportunity when it met with strong desire from the political establishment to develop SFSCs/LFSs at the national and local community level (Balázs, 2012). Adopted in 2012, the new National Rural Strategy 2020 (NRS), also referred to as 'The Constitution

of Rural Hungary', covers agri-economy, rural development, environmental protection and food economy and aims to strengthen the integrity of landscapes, people, good quality food, safe food supplies, and sustainable natural resource management. It claims a proportionately much higher allocation of resources for the development of Local Food Systems, promoting such transitions as a primary tool of local economic development. More broadly, the strategy acknowledges that social functions of food and agriculture extend beyond rural development policy and to health, environment and national security.

Since 2012 new rules have been provided to organize and operate farmers' markets in the Hungarian Trade Act. Significant alleviations were made in order to enable organizations, public institutions or even individuals to open and operate producers' markets in their vicinity. Prior to these changes, legal preconditions were identical for both huge Market Halls and tiny Farmers' Markets in terms of hygienic standards and necessary infrastructure. According to the new framework, producers can legally sell their self-produced products within a 40 km radius of their origin - with the exception of Budapest, where producers coming from the entire country may sell their own products. However, the new concept does not involve any further incentive to directly support the organization and the quality-assurance (both of critical importance) of such markets, leaving the economic sustainability of them an open question.

3.3.4. Summary

Alternative food production and distribution schemes in Hungary play an increasing role in restoring the important and once strong relationship between urban and rural areas. Initiatives have considerable social and environmental benefits such as enhancing trust and responsibility, building communities and maintaining agro-biodiversity. Alternative production and distribution schemes contribute to bringing small scale producers and family farms - trustees of adaptable, resilient rural lifestyle and food security – into a more stable position.

All alternative models, however, are faced with the challenge of surviving and forging a pathway to a stable existence while remaining relatively isolated within the larger Hungarian agro-food domain. Alternative food initiatives will continue to be isolated for the immediate future, and their ability of to endure long enough to begin the transformation from niche to norm will depend on effective support and favourable policy framework conditions, along with a continuing increase in interest from the domestic consumer base. Currently the most frequent and popular of all SFSCs, market purchases account for a 5% portion of daily household consumption in Hungary (Szabó and Juhász 2013) – farmers markets even less, though the figures probably increasing; a telling figure which is indicative of future challenges from the perspective of influencing consumer behaviour.

Most of the models also struggle with viability: there is a risk that niche innovations reach their maximum affordable energy to be invested well before reaching the critical mass to hit a tipping point. Cynically enough, some models aiming for sustainability are not necessarily sustainable in the economic sense.

The challenge in Hungary is still to elaborate alternatives that truly reflect the original concept but can be integrated into existing supply systems and at the same time, reaching economic sustainability and viability.

3.4. Community supported agriculture

Community Supported Agriculture (CSA) is often cited as a specific form of local food systems (LFSs) (Kneafsey et al., 2013; Renting, 2012). CSAs are community-based agriculture cooperatives based on long-term partnership and risk-sharing between one or, in some instances, several producers and their consumers. CSAs in Hungary typically organise their activities as producer-led, producer-community partnerships, or civil society organisation-led. In marketing practices they either follow the share

(membership, contractual) model with members paying in advance (monthly or seasonally) or the box scheme model, involving weekly decision making without contracts. A CSA relationship always implies the capacity to extend beyond economic exchange to include social roles, motivations and benefits for both farmers and consumers. CSA, in this sense, attempts to re-embed food production and consumption as economic activities in just and reciprocity-based social relations where conventional economic roles (such as producer and consumer) develop into social ones (members of a community) and, consequently, non-price considerations take on greater importance than in conventional market exchanges (Hinrichs, 2000). CSAs are therefore also considered as potential laboratories for catalysing social change to enhance consumer-producer cooperation and regain citizens' control over the ways in which food is produced and procured (Feagan & Henderson, 2009). While literature on the expansion of the CSA movement in Western countries is relatively extensive, not much information is available on the situation concerning so-called post-socialist countries, such as nations in Central and Eastern Europe (CEE). We rely on a recent study to examine CSAs as niche innovation in the Hungarian agro-food system (Balázs, 2014; Dezsény, Balázs, & Réthy, 2014).

3.4.1. Innovation and market trajectory

The evolution of the first Hungarian CSA project has been extensively examined (Vadovics et al., 2010; Zsolnai & Podmaniczky, 2010). Founded in 1998 the Open Garden Foundation experienced quick membership growth, reaching 150 families before closure in 2006. Similar pioneer projects were started in 2005, but these initiatives also failed to deliver a profitable business model in the long run. One reason for the failure of early CSA models was the inability to successfully match the quantity of vegetables offered in boxes with affordability for customers also in a way which also secured fair income for producers. The increasing demand for organic products also required constant infrastructural investments, and ever increasing transport and operational costs were not carefully calculated and incorporated in box prices.

Following such precedents, a series of new CSA-projects were started in 2010-2011. The necessary impulse to found new CSAs came from improving institutional-regulatory frameworks, practical training courses, networking opportunities, media/marketing services and finally policy advocacy offered by the Hungarian CSA platform in 2012 and 2013. The platform is comprised of varying but mostly small actors (community developers, researchers, entrepreneurs, activists) and it aims to facilitate and monitor the development of the sector and coordinate actors' strategic commitments.

Nevertheless, growth in CSAs is still relatively insignificant in terms of market share. During the last 4-5 years a growing number of customers or members joined CSAs, which became stable, but continue to face uncertainties. CSAs in Hungary typically do not offer a range of products that can make up a full diet (as imported and non-farm products are not typically offered in boxes), although box offerings typically include 8-10 vegetables, spices, herbal plants and some fruits, mostly organic and sometimes landraces, local varieties. Often voluntary coordinators help farmers match the needs of local groups and manage deliveries. Collaborations between CSA farms also assists in providing a regular assortment of diversified produce throughout the entire season.

In CSAs the weekly vegetable box itself is a main socio-technical innovation; a learning tool in linking the consumer to socio-ecological issues. Members are entitled to an equal share of the produce delivered in the box. It is often offered as a present in member networks or to needy families to help spread the CSA-model. Farmers provide further flexibility by meeting individual demands through pre-orders. Consumers also cooperate with each other in splitting shares, organising home deliveries, and by exchanging excess produce.

As for price/performance, farmers can cut back on their sales costs (delivery, marketing, and packaging) and through the membership fee they also make more efficient

production and rotation planning and can more accurately predict revenues. As long as the operations of the start-up are limited to producing for and selling in a direct market, returns and operational costs are expected to stay low. Still, CSA does not provide enough to live on for any of the farmers, and those involved require additional sources of income. Additional economic activities typically include gardening or part-time jobs in agriculture. To cover any incurred losses most farmers already possess the necessary farming experience from the past and enough capital as well.

Share prices do not entirely capture the costs of community building and associated environmental benefits. As a recent practice oriented study pointed out this pricing anomaly involves the unrecognised cost of developing a food community (Balázs, 2014). In fact, farmers are not earning a living wage from their CSA operations and rely on different survival strategies. These include food processing to provide products with higher added value (e.g., ratatouille, dried pumpkin seeds, sea buckhorn products for the market); season extension techniques (greenhouses heated by electricity or manure, storage capacity for the winter); collaborative CSA (farmers team up to provide a full-diet assortment of diversified produce throughout the entire season); drop off points (infrastructure development to reduce transport costs); involvement of members (volunteers for organising pickup points and work on the farm).

3.4.2. Actors and social networks

Social acceptance of CSAs is not without problems. Similarly to SFSCs all over Europe, farmer-led CSAs in Hungary almost exclusively target young, wealthy, self-reflexive, extrovert, urban, conscious consumers with high levels of education, who in most cases have a family and strongly resist the dominant consumption culture. More and more actors are joining every year and the majority of members joined their CSA primarily for a convenient supply of fresh, healthy, local, organic produce from a producer they personally know. Though they tend to mention environmental protection issues (such as environmentally friendly production methods and less packaging), they rarely emphasize explicitly broader sustainability concerns as reason for pursuing box schemes. Recent research also suggests that Hungarian CSAs are on the move between functional (service-oriented) and collaborative (community-oriented) model by supporting community development in urban and peri-urban areas (Balázs, 2014). In most cases the agreement between farmers and consumers is based on the French AMAP contracts. Such contracts are often seasonally adjusted to track production costs, accompanied by practical arrangements to diversify the range of products.

3.4.3. Governance and policy

CSAs were practically unknown in Hungary until a decade ago, whereas today various types of state, market and civic actors have joined up to create a number of new CSAs. Policy makers at national and municipal levels now explicitly encourage operators to start community food programs acknowledging CSAs' transformative potential for food-system localization. The new rural development regulation explicitly mentions CSAs and promotes measures that help small-scale agro-ecological investments and various forms of producer co-operation.

The popular press and advocacy literature helped such production and distribution systems, founded on the mutual commitment of producers and consumers to get wide recognition. CSAs have been depicted as some of the hot food trends in the last few years that provide a socially innovative solution to interlocking ecological, food and energy crises. Most articles emphasized how CSAs support a group of farmers by providing them with a fair wage for healthy food.

Similar to their reflection in public policy, CSAs have been regarded as a form of direct sale at the community level and a tool for local economic development. The National Agricultural Advisory, Educational and Rural Development Institute, as the main body to

implement the Rural Development Strategy financed the organisation of the Hungarian CSA platform in 2012 and 2013. Initiated by the Association of Conscious Customers, the Research Institute of Organic Agriculture and the Environmental Social Science Research Group, the CSA platform provides networking opportunities, media/marketing services and policy advocacy to CSAs in Hungary.

Although there is not yet any alignment between local, national and European policymakers and policy instruments, policy communities have been already committed to CSAs and provide a prominent place for community agriculture in identifying new policy development pathways (through regulations, subsidies, infrastructure programs). In the European Union's new agricultural and rural development policy 2014-20, SFSCs may be targeted by thematic sub-programmes within rural development programmes and CSAs expect to get further public funding to extend their services (Kneafsey et al., 2013).

3.4.4. Summary

The demand for locally produced food is new and anticipated to increase, as more sustainable consumption routines emerge. As a result, the CSA sector is likely to expand in Hungary. Farmer-led CSAs can launch niche innovations through facilitating learning processes by educating members in adhering to healthier diets, and procuring food in a more environmentally friendly way on the one hand, while also assisting the development of community relations and solidarity feeling on the other. Farmers create niche innovations by relying on external financial resources and reaching out to trust based personal networks or ethical consumers to create new food communities and establish market segments. Initiatives need to strengthen their socio-political or economic bases to expand in the future. Box schemes keep produce out of the logic of market economy, and deprive vegetables of their commodity nature. CSA box systems practically re-code the meaning attached to such products by the culture of trade. Under such circumstances what makes these farmer-led CSAs unique is their potential to catalyse changes in dominant food systems, and reconnect consumers with producers by fostering a collaborative culture of sharing, gifting, bartering and donating.

4. Conclusion

4.1. Overall assessment of momentum

Relative ranking of niche-momentum	Main drivers of momentum	Pathway	Momentum
1. Localized food chains, regional food production	Increasing role in restoring relations between urban and rural areas with considerable environmental benefits. Challenge of remaining isolated without real momentum. Struggles with self-sustainability.	B	Medium
2. Community Supported Agriculture	Increasing numbers of consumers and widening social network, but Recurring price anomaly weakens the economic momentum; Policy clearly supports the innovation.	B	Medium
3. Organic agriculture (including consumption / demand side)	Price/performance improvements main driver Policy forms a secondary driver (because price/performance improvements led to positive visions that lead to support policies) Networks of big firms and policymakers are increasing, but there are still doubts and contesting views in wider public	B	Low
4. Vegetarianism / lowering meat consumption	Broadening network and niche-market of the health conscious through restaurants and food-delivery enterprises. Counteracting food policy, no sign of direct support	B	Low

4.2. Conclusion about transition pathways

All four cases belong to pathway B. Changes depend on wider societal change, especially from the most important players of the broader regime. Some of the new entrants in the sector (mainly small scale enterprises with considerable capacity to risk taking and handling uncertainties) take the lead in shaping socio-technological changes reflecting wider behavioural and cultural changes in the consumption patterns. None of these niche-innovations has great momentum; however they are already taking the necessary baby steps towards sustainability and therefore could be interpreted as tight pathways towards transition.

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