

International comparison of product supply chains in the agri-food sector:
determinants of their competitiveness and performance on EU and international markets



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EU Quality Schemes: market potential for fresh and processed products

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Abstract

The working paper provides an analysis of “new markets” in selected EU countries. The recent situation, development as well as challenges and tendencies on the markets for products produced and processed according to the EU quality schemes (organic products, protected designation of origin (PDO), protected geographical indication (PGI), and traditional specialties guaranteed (TSG)) will be discussed in the paper in order to identify the market potential for those products. In particular, several case studies of specific EU markets are included.

There are wide variations across the EU as to the size of the current market and likely future potential for organic food as well as PDI and PGO products. Of the countries considered, geographical indications are most developed in Italy, but remain of peripheral importance in some established (e.g. UK) and new member states (e.g. Romania). In some countries, where the local market is restricted by low purchasing power, development of the organic sector relies solely on export sales (e.g. Serbia). In established member states the situation of the organic sector has been rather mixed. In Germany sales continue to grow, albeit at a slower rate than in the mid-2000s, while the UK experienced a sharp downturn after 2008. The results of our analysis show that the market was heavily influenced by EU policy (especially by financial support) and the global crisis. After many years of growth, market development has been slowed down by the economic crisis, but the first signs of reviving are starting to show, especially in the context of new EU policies for the period 2014-2020. In spite of all these difficulties the market, in general, could be considered dynamic and has great potential for growth.

COMPETE Working Papers present work being conducted within the COMPETE research project. The project analyses competitiveness of various European agri-food supply chains and its determinants. Working papers are intended to stimulate reactions from other experts in the field. For more information on the project see the back cover. Unless otherwise indicated, the views expressed are attributable only to the authors in a personal capacity and not to any institution with which they are associated.

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List of abbreviations and acronyms

ARERA	Asociatia Romana de Economie Rurala si Agroalimentara “Virgil Madgearu”
ASAS	Academy of Agricultural and Forestry Sciences in Romania
BEL	Ekonomski Fakultet Univerzitet u Beogradu
BSN	Balkan Security Network
BVE	Bundesvereinigung der Deutschen Ernahrungsindustrie Ev
CERS-HAS	Magyar Tudomanyos Akademia Kozgazdasag-Es Regionalis Tudomanyi Kutatokozept
COMPETE	Project “International comparisons of product supply chains in the agri-food sectors: determinants of their competitiveness and performance on EU and international markets”
CSO	Czech Statistical Office
CULS	Ceska Zemedelska Universita v Praze
CZK	Czech Korona (currency)
DPMA	German Patent and Trademark Office
EAFRD	European Agricultural Fund for Rural Development
EC/EEC	European Commission
ES	Environmental Stewardship in England
EU	European Union
EUR	EUR currency
FBB	Federation for Organic Farmers in the Netherlands
FED	Federazrone Italiana dell Industria Alimentare Associazione
FFDI	Potravinarska Komora Ceske Republiky
IAEI	Institute of Agricultural and Economics Information in Czech Republik
IAMO	Institut für Agrarentwicklung in Mittel- und Osteuropa
IEA	Institute of Agricultural Economics – Romanian Academy
LEI	Socio-Economic Research Institute in the Netherlands
MA CZ	Ministry of Agriculture of the Czech Republic
MADR	Ministry of Agriculture and Rural Development in Romania
NGO	Non-governmental organizations
NVEL	Dutch Association for Ecological Agriculture
OELS	Organic entry level scheme in England
OFS	Organic Farming Scheme in England
ONS	Office of National Statistics in England
OSIM	National Mark Registration Office in Romania

OUG	Government's Emergency Ordinance in Romania
PAN	National Action Plan for Organic Farming and Organic Products in Italy
PDO	Protected designation of origin
PGI	Protected geographical indication
PNDR	National Rural Development Programme
RDP	Rural Development Programme
RSD	Republic of Serbia Dinar
SIEPA	Serbian Investment and Export Promotion Agency
SINAB	National Information System on Organic Agriculture in Italy
SQNPI	National Quality System Integrated production
SRUC	Scotland's Rural College
TSG	Traditional speciality guaranteed
UAA	Utilised agricultural area
UK	United Kingdom
UMIL	Universita degli Studi di Milano
UN	United Nations
UNEW	University of Newcastle upon Tyne
UNIWARSAW	Uniwersytet Warszawski
UP	Univerza na Primorskem Unlversita del Litorale
USAID	United States Agency for International Development
USD	United States Dollar
VDBD	Association of Organic-Dynamic Farmers
VODJ	Vod Jetrichovec, Druzstvo
WAG	Welsh Assembly Government
WU	Wageningen Universiteit

Executive Summary

The working paper was realized within the framework of the COMPETE project, which seeks to deliver a coherent and innovative evaluation of competitiveness of European food chains by integrating various new approaches. Based on this, the research results will be used for deducing a congruent, coherent, and consistent set of policy recommendations aimed at improving competitiveness and promoting the knowledge based bio-economy in Europe. The aim of the paper is to identify the market potential for products produced and processed according to the EU quality schemes (organic products, PDO, PGI and TSG) in internal and international markets. The paper provides insights on the development of supply and demand for products produced according to the EU quality scheme as well as on policies that affect the development of new markets in eight European countries (Czech Republic, Germany, Italy, The Netherlands, Romania, United Kingdom, and Serbia).

The analysis is focused on the following aspects: legal frame, institutions, and implementation of the quality schemes, supply side, demand side, trade, investments in the sector, problems identified, and tendencies. For each country analysed, the intention was to keep a similar structure, in order to facilitate comparison and highlight the similarities and differences, however there are limitation due to cross-national differences in data availability. Each chapter, which corresponds to a different country analysis, finishes with a short conclusion. The case studies try to show some practical aspects and possible ways of implementation of the EU quality schemes.

Furthermore, the working paper provides general conclusions drawn from the measurable results of EU quality schemes implementations in the selected countries, among them a few must be mentioned: organic farming can be considered as a dynamic sector in some EU countries; we expect the consumption to increase in the near future, at least in the countries where the effects of the crisis disappeared; as consumers become better informed and more demanding, the variety of products will also increase. There are two main challenges for consumption: the price premium of organic products, which restricts demand in countries where consumers do not have high purchasing power, and education (as consumers become more educated and informed of food issues, they are more inclined to buy organic products whether it is because of factors like food safety, concern for the environment, or health reasons).

At the same time, we identify a few difficulties regarding the expansion of production: huge investments for conversion; high costs for keeping standards; the time-consuming and complex system of application and low confidence in and recognition of the labels on part of the potential buyers; as well as, in some cases, low interest in the sector from large-scale enterprises and producer associations, which represent these large enterprises.

As far as it concerns the development and market potential for products from the second EU quality schemes, there are similitudes and differences within EU countries. We identify similar characteristics between Eastern European countries, but also among some old members. This is a result of lack of experience, tradition, and sufficient models to be replicated by other interested potential applicants.

In conclusion, key players and organisations must have a positive view on the future development of the market, especially in the framework of the new CAP for 2014-2020. The main opportunity will lay in the growing demand, especially by supermarkets. This will be driven by increased customer attention for conscious food choices, sustainable production, and locally produced food. A challenge for the sector will be to make the production processes and the whole organic value chain more sustainable. Extra-legal requirements already present challenges in some international markets. These challenges will also be affected the price developments in the organic sector.

By present this working paper we open a new discussion about trends in the sector, its future developments, and models for a good standard of life.

EU QUALITY SCHEMES: market potential for fresh and processed products

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1 Introduction

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This report aims to identify the market potential for products produced, processed and traded according to the EU quality schemes (organic products, PDO, PGI and TSG) in domestic and international markets. First, it reviews the EU regulations regarding the quality schemes and provides information about the importance of the quality schemes. Second, it elaborates on how the schemes were implemented in the EU member countries.

At the beginning, we would like to present the field of our research and give information about the theoretical background. At present, no universal definition for organic products exists or is widely accepted by all scientists and producers in the world, even though the EU bodies regulated the field by Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products. Organic food production is a self-regulated industry with government oversight, distinct from private gardening. Organic foods are produced using methods of organic farming. In general, organic farming responds to site-specific farming and crop conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity. Synthetic pesticides and chemical fertilizers are not allowed. Organic foods are also not processed using irradiation, industrial solvents, or chemical food additives. Other definition can be: organic products are the result of the organic farming system, which is a modern practice to grow crops, or raise and fatten animals and to produce foodstuffs, which is fundamentally opposed to conventional farming. The role of this agriculture system is to produce a much cleaner food, more appropriate to the human body metabolism, but in full correlation with the preservation and development of the environment in respect to nature and its laws. The process and procedures for obtaining organic products are regulated by strict production rules and principles, which start from the quality that land must have and end up with the effective final food product.

Irrespective of the words we use, organic products must be produced in organic farms, under strict regulations, free of any “non-natural” additives or methods, based on natural growth, in a clear environment (soil), useful for the next generations, as well.

Regarding protected designation of origin products (PDO), we can define them as: products originating without exception from a particular place, region, or country; quality or characteristics are due to the geographical environment with own natural and human factors; production are carried out, totally, in the specified geographical area.

Protected geographical indication products (PGI) are: products originating from a particular place, region or country; a given quality, reputation or other characteristic is essentially attributable to its geographical origin of the product; at least one of the stages of production are carried out in the specified geographical area.

As regards traditional specialities guaranteed products (TSG), they can be defined as: products resulting from a production process, processing or composition corresponding to traditional practice or food product; specific products or food products from traditionally used raw materials or ingredients.

Logos use in EU for the above mentioned products are represented in Figure 1.

Figure 1 Logo for PDO, PGI, and TSG products in EU



The report provides an overview about the institutional and policy framework: legislation, government institutions dealing with producers associations, rules, assistance, funding, aim of policy concerning organic product and patterns in development of organic cultivated area, and similar developments.

More specifically, in this stage, the report provides more detail about market developments of organic products, PDO, PGI, and TSG products in Czech Republic, Germany, Italy, the Netherlands, Romania, United Kingdom, and Serbia, concentrating on the most important products, representative for the country. The focus was on one organic or one other under quality schemes (PDO, PGI, TSG) for each partner country. However, due to the country specific situations, the PDO, PGI, or TSG products are not necessary from the same group of products for each country.

The report covers demand, supply, trade, and challenging issues for organic products and for the second quality scheme. Demand for organic products and the second quality scheme in the country covers overall trends and attitude toward organic products, expenditures for organic product in the last years, category of consumers who primarily buy organic products, which organic products are mostly bought, and where, in what type of markets such as spot market, super market, and similar.

Supply of organic products in each country covers producers and their output i.e. information about the number of enterprises/farms, cultivated area, yields, and development in the last years. In addition, it covers trade volume in total, at the national level, intra- and extra-EU

sales, problems related to production and trade of organic products, and investment in research concerning ecological cultivation.

The objective was to collect comparable information for the second quality scheme. However, this was not possible in all cases due to missing data.

Conclusions provide interesting trends, open questions, and future developments based on the review outcome. However, given the limited time at this stage, the only reasonable option was to collect corresponding information, which already exists from national statistic, press, national studies and similar, including interviews. The aim was to collect the most interesting and challenging information.

At the end of our introduction, we would like to list the main EU regulations in the case of organic, PDO, PGI, and TSG products. They are:

- For organic products:
 - o Commission Regulation (EC) No. 2092/1991 regarding organic farm production and the indications for their presentation as agricultural and agri-food products (the legal basis of the organic farming system was established);
 - o Council Regulation (EC) No. 834/2007 (28 June 2007) on organic production and labeling of organic products, which defines the criteria of organic food and production in agriculture (any bio-labeled product that is produced and sold in the EU must fulfill these criteria).
- For PDO, PGI, and TSG products:
 - o Regulation (EC) No. 1898/2006 (14 December 2006) laying down detailed rules for implementing Regulation (EC) no. 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs;
 - o Regulation (EU) No.1151/2012, which seeks to improve the operation of EU food quality policy, including an overhaul of the Traditional Speciality Guaranteed (TSG) scheme.

2 Czech Republic

Lukáš Čechura, Zdeňka Kroupová, Michal Malý

2.1 Organic-food market in the Czech Republic

Organic farming is subjected to a number of rules that allow to minimize the negative impacts of agriculture on the environment. The compliance with these rules is subject to the statutory definition and the definition of supervisory institutions. These have existed in the Czech Republic since the early nineties.

The development of Czech organic farming has been heavily dependent on the state subsidy policy and in recent years, but also on the agricultural policy of the European Union. In the last years, however, more and more private organizations and associations have focused on supporting of organic market development, especially through promotion and education.

2.1.1 Implementation

Legal regulation of Czech organic farming is directly linked to European legislation: Council Regulation (EC) No. 834/2007 on organic production and labelling of organic products and repealing Regulation (EEC) No. 2092/91. The main national regulation is Act No. 242/2000 Coll., on Organic farming and amendments to Act No. 368/1992 Coll., on administrative fees, as amended. The Act regulates the conditions of organic farming, the certification and labeling of organic products and organic products, and the monitoring of compliance with those rules. The condition of the organic farming is registered with the Ministry of Agriculture and compliance with the rules of organic production, which specifically defines the European legislation. Registration is not mandatory for retailers of already packaged and certified organic products. Ministry of Agriculture Executive Decree No. 80/2012 Coll. is the implementing regulation of above mentioned Act No. 242/2000.

From an institutional point of view, the Ministry of Agriculture in Czech Republic is the competent authority in organic farming sector in the Czech Republic. It determines the concept and development of Czech organic farming and guarantees the inspection system. The ministry delegates supervision of adherence to the principles of organic farming to four private control and certification organizations: KEZ o.p.s., ABCERT AG, Biokont CZ, s.r.o., BureaVeritas Czech Republic, spol. s.r.o. The Central Control and Testing Institute of Agriculture (ÚKZÚZ) carries out the official controls according to Council Regulation No. 882/2004 on official food and feed inspection. Imports of organic products from third countries are checked by the Customs Office.

If we focus on grant support for organic farming it is necessary to add two more state institutions – the State Agriculture Intervention Fund, which is an accredited payment agency, and the Ministry of Industry and Trade, which supports research in the field of organic production.

The Federation of the Food and Drink Industries of the Czech Republic and the Institute of Agricultural Economics and Information can also be added to the list of governmental institutions dealing with organic farming. The first aims to facilitate the removal of barriers to

organic food production, promote domestic products and build trust in the Czech organic food. The second focuses on the collection of organic farming data.

Branch organizations play also an important role in the development of organic farming, namely: PRO-BIO Association of Organic Farmers, which is a nationwide association of organic farmers, processors and trades in organic food, Ekovín, an association of integrated and organic production of grapes and wine, and Biosad, an association for organic production of fruit and Czech Technology Platform for Organic Agriculture comprising 19 institutions of the area of science, research, practice and education. A number of other organizations perform the promotion and awareness of organic farming, namely League for Ecological Alternatives, Partnership Foundation, AREA viva, Daphne CZ – Institute for Applied Ecology, Ekoncentrum Paleta, Veronica Ecological Institute, Envic association, and ZERA – Regional Agency for Agriculture and Ecology.

In the field of education, research and consultancy Bioinstitut, o.p.s. – Institute for Organic Agriculture and Sustainable Landscape Development, EPOS – Association of Consultants in Organic Farming and Green Marketing also operate.

Many of the institutions have participated in the creation of a strategic document for the development of organic farming in the Czech Republic, Action Plan for Organic Farming 2011-2015. The document defines the vision of Czech organic farming: “Organic farming will be a fully advanced branch of agriculture with all the relevant characteristics, such as a steady market, services and government policy supporting the provision of public goods, including aspects of the environment and animal welfare” (MAg, 2010). It also defines three main aims:

1. Stable, long-term profitable and competitive markets with organic foods produced efficiently and in harmony with organic farming principles, with regard to animal welfare, the environment, and considerate processing methods;
2. Infrastructure allowing continual and sustainable development;
3. Effectively linking primary production and processing activities of agricultural as well as of non-agricultural character throughout the organic farming sector.

The partial aims include achieving:

- 15% share of organic farming in total agricultural land
- Minimum 20% share of arable land in total organic farmland
- 3% share of organic foods in the total amount of consumed food
- 60% share of Czech organic food in the organic food market
- At least 20% increase in organic food consumption per year (MAg, 2010)

The tools to achieve these aims contain the support of information distribution and promotion, education, advisory services, and research. The Action Plan does not have its own budget. The implementation of the Action Plan is dependent on other measures and programme, which support organic farming.

Subsidy policy for organic farming

The basic support for organic farming is implemented within Axis II of Rural Development Programme (RDP), improving the environment and the countryside, and the conditions of this support is specified in Government Decree No. 79/2007 Coll., on Implementing Agro-environmental Measures, as amended. The purpose of the support is “compensation for economic loss due to the organic farming system” (MAg, 2012).

Information about the support from this program provided per hectare and differentiated by land use is given in Table 1.

Table 1 Level of payment

Specification	EUR per hectare
Arable land	155
Grassland – with parallel conventional production	71
Grassland – without parallel conventional production	89
Permanent cultures – intensive orchards, vineyards, hop-fields	849
Permanent cultures – extensive orchards	510
Vegetables and special herbs on arable land	564

Source: MAg, 2012

Organic farmers and producers have also an advantage in a point-evaluation of submitted projects within five other RDP measures: 112-New farmers going into business, 121-Modernisation of farm enterprises, 123-Adding value to agricultural and food products, 311-Diversification of non-agricultural activities and 313-Support for tourism (Bioinstitut, 2012).

National subsidies (according to the so-called Principles defining conditions for the provision of subsidies on the basis of paragraphs 2 and 2d of Act No. 252/1997 Coll., on Agriculture) were another source of subsidies for organic farming, but it is currently only focused on support for activities of technology platform.

2.1.2 Market development of organic products in the Czech Republic

The market for organic products was established in the 1990’s in the Czech Republic. In comparison with other European Union states, it can be therefore described as relatively young and small in extent. Total sales of organic food including exports were about 2.1 billion CZK (85.41 million EUR¹) in the last years. The main determinant of market development has been financial support for organic farming. In the last 10 years there can be also seen increased consumer interest.

Development of the organic market is also accompanied by the development of its statistical surveys. However, the presented statistics are still below the range of data about conventional agriculture and consumption of conventional foods. The lack of data means that detailed analysis of the organic market is problematic, the indicators, that are available, do

¹ Recalculated with the average exchange rate in 2011: 24.59 CZK/ EUR (Source: CNB, 2013).

not have the same length of time series, are not often available in disaggregated form, and data obtained from different sources vary.

The supply side of the market for organic products has for the entire period a growing trend, both in terms of the number of organic farming entities utilized agricultural area, the number of processors and distributors, and in terms of production volume.

The number of organic farms increased 4.75 times and the average chain index was 1.26. The most significant increase can be identified between years 2008 and 2007, when the chain index reached the value of 1.48. This development was significantly determined by the subsidy policy, namely the Rural Development Programme 2007-2013. Organic farmers represented 8.3% of the total number of agricultural businesses in the Czech Republic in 2011 (see Table 2, the total number of farmers is not yet available for 2012).

Table 2 Production of organic products – agriculture

Production of organic products	2005	2007	2009	2010	2011	2012	Index 2012/2005
Number of organic farms	829	1,318	2,689	3,517	3,920	3,934	4.75
Share of organic farms on total agriculture entities [%]	1.79	2.59	5.65	7.57	8.30	x	x
Organically cultivated area [ha]	254,982	312,890	398,407	448,202	482,927	488,658	1.92
Share of organically cultivated area on agriculture land [%]	5.98	7.35	9.38	10.55	11.40	11.46	1.92
Organically cultivated arable land [ha]	20,766	29,505	44,906	54,937	59,281	58,489	2.82
Permanent grass land in organic agriculture [ha]	209,956	257,899	329,232	369,272	398,060	407,219	1.94
Permanent culture in organic agriculture [ha]	820	1870	645	803	965	1000	1.22
Other land in organic agriculture [ha]	23,440	23,616	19,890	18,054	18,158	17,371	0.74

Source: MAg CR, 2013

Organically cultivated area increased almost twice. After recalculation of this area per farm, the downward trend in average area is apparent and the average size of organic farms fell to 123 ha in 2011. In the size structure of organic farms, farms with an area of 10-50 ha are beginning to pre-dominate since 2006 (38.1% of total number of organic farms in 2011). From other sizes, the farms with an area of 100-500 ha have 17.6% share, 50-100 ha 13.3%, 0-5 ha 12.3%, and 5-10 ha 12.0%.

In terms of land-use, permanent grass land dominates with 83.3% share of organically cultivated area. Permanent culture has the highest average chain index of growth (1.23), which is “largely due to increased payment for this form of production and due to improved know-how on the cultivation of fruit and vines of organic quality” (Bioinstitut, 2012). However, the share of permanent culture on organically cultivated area is still negligible (0.2% in 2012).

In terms of the structure of organic land, positive growth is also in arable land with average chain index 1.63 and 12% share in 2012. Both should contribute to an increase in organic food and products production. The arable land is devoted mainly to cereals (especially wheat and oats) and fodder, orchards prevail in permanent crops. Cattle dominates in animal organic production.

In that context, it should be added that currently localization of organic farms prevails in the mountain out border areas, including less favourable areas.

The fundamental problem, which the organic farmers face, is the lack of demand for organic products and the lack of sales points for organic produce. As a result of this they are often forced to sell their products on the conventional market. The worst situation is for sheep produce, where according Bioinstitut (2012), only 8% of production was sold in organic quality in 2010, in the case of goat meat, it was 11% and beef 22%, while 76% of cereals production was sold in organic quality and in cow milk production even 86%.

This situation should improve by increasing the number of processors of organic products. In the analyzed period (2005-2011) the number of processors increased 3.63 times with 1.25 average value of chain index. After considerable growth, which occurred in 2007 and 2008, the growth of the number of organic producers rather stagnated, which probably responds to the demand for organic food (see Table 3).

Table 3 Production of organic products – food industry

Processing of organic products	2005	2007	2008	2010	2011	Index 2011/2008
Number of organic products producers	125	253	429	618	646	1.51
Meat processing	X	X	67	70	77	1.15
Fruit and vegetable processing	X	X	41	46	51	1.24
Oil and fat processing	X	X	1	4	6	6.00
Milk products production	X	X	67	239	248	3.70
Cereal and starch products production	X	X	15	17	21	1.40
Bakery and confectionery production	X	X	71	45	48	0.68
Other food production:	X	X	96	102	98	1.02
Ready meals production (including baby food)	X	X	10	13	8	0.80
Industrial feed production	X	X	0	1	0	X
Beverages production	X	X	71	94	90	1.27
Pharmaceutical preparations production	X	X	0	0	7	X
Number of organic products distributors*	295	95	151	186	226	1.50

* The registration of operators, who sell organic products to the final consumer in the consumer packaging, is not mandatory since 2006.

Source: IAEI, 2013.

Market stagnation may be also caused by some entry barriers into processing of organic products. The report of the Federation of the Food and Drink Industries of the Czech Republic (2010) stated four main barriers:

- Increased administration (certification, etc.),
- Lack of market penetration,

- Higher operating costs in comparison to conventional production,
- Lack of organic raw materials.

Milk processing, which was realized by 38.4% of organic processors in 2011 and had the highest increase in number of producers in 2010 (chain index 2.60), clearly predominates in the production focus. The other major focus includes other food production with 15.2% share of total number of organic products producers, beverages production with 13.9% and meat processing 11.9% share.

Furthermore, new processors are not only specialists in organic food, but also medium-sized and large food-producing companies include organic products in their portfolio.

The increasing trend is evident also in terms of the number of distributors of organic products, on which, however, precise data are not available.

In 2011, 74.5% of total sales of Czech organic producers was realized in the domestic market and 25.5% was exported abroad (23.18 million EUR). The value of exports experienced a significant increasing trend in time period 2006-2011, see Table 4, with the highest increase in 2009 (chain index 2.44) as a result of downturn in domestic demand. Export growth (average chain index 1.54) exceeds sales growth of domestic producers (1.24), which results in growth of import of organic products from abroad (1.30).

Table 4 shows that approximately half of the consumed organic products have foreign origin. And it is important to add that a lot of organic products manufactured by Czech producers contain imported raw materials or are just repackaged.

Table 4 Export and import of organic products

Specification	2006	2007	2008	2009	2010	2011	Index 2011/2006
Total sales of Czech organic producers including export [bn. CZK]	0.84	1.39	1.95	1.98	2.10	2.24	2.66
Export of organic products [bn. CZK]	0.08	0.10	0.15	0.37	0.51	0.57	7.13
Import of organic products* [bn. CZK]	0.47	0.86	1.11	1.45	0.96	1.34	2.85

* Import includes also products which are repackaged in the Czech Republic.

Source: Institute of Agricultural and Economics Information (IAEI), 2013

The export of organic products is directed mainly from the Czech Republic to the EU countries (97%). The largest volume of organic products is currently exported to Austria. Major importing countries are also Germany and Slovakia.

The import of organic products is realized mainly from west EU countries, especially from Germany, Austria, and Ukraine. Baby food, what makes up more than half of the total value of imports to the Czech Republic, is the main imported commodity. Processed fruit and vegetables, fruit and vegetable juices, coffee, tea, cocoa, chocolate, confectionery, and soft drinks are other major import commodities.

2.1.3 Demand for organic products in the Czech Republic: overall trends

Demand for organic products, described by the total expenditures for organic products, increased more than three times in the analysed period 2005-2011 with an 1.25 average chain index. The most significant growth took especially place in the years 2005-2008. The highest increase was reached in 2007, when the chain index of expenditure was 1.70. This growth, however, was not caused only by an increase in the amount of purchased organic products, but also by an increase in prices, as can be seen from the value of the expenditure at constant prices in 2005 in Table 5. In 2009, however, the increasing trend in demand for organic products was stopped and expenditure for organic products at current and constant prices stagnated until 2011, when Czech consumers spent 1.67 billion CZK (67.71 million EUR) on organic products. In terms of per capita expenditure for organic products, the value was 158 CZK (6.43 EUR).

Table 5 Expenditures for organic products

Expenditures for organic products	2005	2006	2007	2008	2009	2010	2011	Index 2011/2005
Total expenditures for organic products [bn CZK]	0.51	0.76	1.29	1.80	1.61	1.59	1.67	3.26
Total expenditures for organic products in price 2005 * [bn CZK]	0.51	0.75	1.22	1.58	1.47	1.43	1.43	2.80
Expenditures for organic products per capita [CZK]	50.0	74.0	126.0	176.0	154.0	151.0	158.0	3.16
Share of organic products in total food and beverages consumption [%]	0.18	0.35	0.55	0.75	0.65	0.63	0.65	3.61

* Deflated by the consumer price index of food and non-alcoholic beverages, source: CSO.

Source: IAEI, 2013.

The share of organic products in total food and beverages consumption essentially replicates the mentioned development of expenditures for organic products and reached the value of 0.65% in 2011.

Weakening consumer interest in organic products after 2009 can be considered as a result of the economic crisis, which affected the Czech economy mostly in 2009 and caused slowdown in nominal and especially real wages of Czech consumers. Consumers replaced organic products with 100-120% higher average price level by cheaper conventional food. Just a higher price level deters many consumers from buying organic products. Other barriers to purchase include the distrust of consumers in higher quality of organic food and in the respect of all the principles of organic production in their manufacture. In consequence of this, the growing demand for “organic products with biography” (with a clear and easily identifiable domestic origin) can be observed in recent years.

According to the final report of a quantitative survey, Awareness and purchase behaviour in organic products issue (done for Ogilvy & Mather by STEN/MARK a.s. in 2008 and 2010), organic products are especially bought by women, people with higher level of education, and with higher standard of living. According to the survey, even 81% of respondents believe that families with regular level of income can buy organic food only exceptional.

Previous research of Václavík et al. (2008) also shows that organic food is bought by college-educated people under the age of 49 years, families with at least one child under the age of 14, and with higher than average income. The survey also states that only 5% of Czech consumers regularly buy organic food.

The aforementioned conclusion is reflected in the structure of demand for organic products, which is dominated by the category “Other processed food” (see Table 6), where baby food occupies 50.6% in 2010 and 45% in 2011. This reflects the willingness of consumers to pay twice higher price (fruit baby food) for the expected higher quality of food.

Table 6 Share of main categories of products in total expenditures for organic products, in %

Categories of organic products	2005	2006	2007	2008	2009	2010	2011	Index 2011/2005
Meat and meat products	12.0	7.1	6.2	5.4	9.5	8.6	8.5	0.7
Oils and fats	x	x	x	x	1.8	1.9	1.9	X
Milk and dairy products	20.2	15.2	20.9	22.2	21.1	24.8	19.6	1.0
Fruit and vegetables*	3.5	3.0	5.4	6.2	10.8	10.8	13.6	3.9
Cereal and starch products	5.5	7.1	6.0	5.9	6.3	8.4	9.7	1.8
Bakery products and confectionery	4.0	3.0	1.6	3.8	9.4	8.2	9.4	2.4
Other processed food	43.0	49.5	49.3	45.9	35.9	32.8	35.3	0.8
Beverages*	12.0	15.2	10.6	10.6	5.2	4.5	2.0	0.2

* Fruit juices and vegetable juices were included in the category of beverages in 2005-2008 and in the category of fruit and vegetables since 2009.

Source: IAEI, 2013.

As can be seen from Table 6, the second most demanded commodity category is “milk and dairy products”, followed by “fruit and vegetables”.

The demand structure is stable over time. Significant fluctuations occurred only in the category “Bakery products and confectionery” in 2008 and 2009, when their share of the total demand increased 2.4 times.

Table 7 Share of main sales location in total expenditures for organic product, in %

Categories of sales location	2005	2006	2007	2008	2009	2010	2011	Index 2011/2005
Super/Hyper market	57.0	67.0	67.5	74.0	65.7	62.2	64.4	1.1
Chemist*	x	x	x	x	3.5	3.2	3.4	X
Health food store	37.0	28.0	22.5	18.0	17.7	19.4	19.8	0.5
Independent grocery store	2.0	3.0	2.5	2.0	2.4	1.2	1.4	0.7
Farm and other direct sales	4.0	2.0	2.0	1.4	3.9	3.5	5.2	1.3
Pharmacy	x	x	5.0	4.0	6.0	4.7	5.2	X
Gastronomy	x	x	0.5	0.6	0.8	0.8	0.6	X

* Chemists are included in the category of supermarkets for years 2005-2008.

Source: IAEI, 2013.

The main place of purchase of organic products are steadily supermarkets and hypermarkets with 64.4% share in total expenditures in 2011, followed by health food stores (19.8%), as shown in Table 7. In contrast, the utilization of organic food in hospitality and public catering has long been at a low level (0.6% in 2011).

Direct sales of organic products, which includes farm sales, sales of organic products at farmers markets or via internet increased significantly, especially in 2009. According to Bioinstitut (2012), 5.3% of Czech organic farms realized this type of sale and organic products for approximately 30 million CZK were sold directly on farms in 2010. And “nearly 70% of total Czech turnover from direct organic sale was attributed to the 11 organic farms with the highest turnover from direct sale (over 500,000 CZK)”.

In terms of organic products, especially beef, milk, dairy products, eggs, vegetable, fruits, and potatoes are sold by this type of sale.

It can be added that bakery and confectionery products are significantly bought in specialized stores, baby food in pharmacies and chemists. However, 60% of bakery and confectionery products, as well as 75% of milk and milk products, 1/3 of oil, fruit and vegetables, almost 50% of other processed food and majority of meat are bought in retail chains.

2.1.4 Investment in research concerning ecological cultivation

In the research field of organic production, 16 projects were initiated in 2007-2011. These projects were supported by funds from the Ministry of Industry and Trade and the Ministry of Agriculture and overall they were supported by 33.8 million CZK (about 1.5 million EUR). The average amount per project was than 2.1 million CZK.

Two projects were supported from TIP 2009-2017, which is a research programme of the Ministry of Industry and Trade and is focused on plant production productivity. The rest of projects were supported by the Research in Agriculture Sector Programme of the Ministry of Agriculture and were focused especially on quality and safety of animal products, the innovation of crop rotations and plant protection.

The beneficiaries of this aid are mainly research institutes (e.g. Crop Research Institute (4 projects), Food Research Institute Prague (2 projects), Czech University of Life Sciences Prague (2 projects)).

2.2 PDO, PGI and TSG in the Czech Republic : PDO case study for "Saaz" Hops

The product was officially registered at 09.05.2007. The number of the dossier is CZ/PDO/0005/0402.

2.2.1 Supply side

In the Czech Republic currently more than 15 varieties of hops are commercially grown, in three certified areas. Table 8 provides information about the ratio of these varieties on the total production area in 2012.

Saaz is a noble variety of Czech hops. It was named after the Czech city of Žatec (German: Saaz). This hop is used extensively in the Czech Republic to flavour beer styles such as the Czech pilsner because of its very distinctive flavour and very low Alpha Acid level. This hop is generally used for Bohemian style lagers and Pilsners. Only Saaz hop from Saaz area is certificated like Protected Designation of Origin (PDO).

Table 8 Varieties of hops in 2012 by regions, ha

Varieties of hops 2012/regions	Saaz	Auscha	Tirschitz	CZ
SAAZ	3,032	398	424	3,854
Agnus	50	3	0	53
Bor	3	2	0	5
Fuggle	0	0	5	5
Harmonie	2	0	0	2
Kazbek	1	0	0	1
Premiant	140	44	63	274
Rubín	1	0	0	1
Saaz Late	7	0	2	9
Saaz Special	2	0	0	2
Sůádek	163	18	60	241
Vital	3	0	0	3
Other	11	0	1	12
Total	3,415	465	555	4,435

Source: Situation Reports 2012, Ministry of Agriculture of the Czech Republic (MA CZ).

The most important area for hops in the Czech Republic is Saaz (about 77% from the total area used for hops in Czech). In case of all varieties of hops, this certified area comprises more than 50% from the area cultivated, with each variety of hop at the national level (in some cases even 100%). About 89% from Saaz area destined for hops are cultivated by Saaz hop variety. Almost the same percentage we have at the national level. These are the main reasons why we have chosen this PDO product as a case study for our analysis.

Table 9 and figure 2 show different trends in the production and cultivated area. At the national level, the area cultivated by all varieties of hops decreased. In the same time, the productions increased, so better yield due to the better use of technologies. The total area of

Saaz hops PDO is gradually decreasing, an average decrease of 123 hectares per year. On the other hand, the production is rather volatile with a strong correlation to the weather conditions (MA, 2011), but the overall trend is mildly increasing.

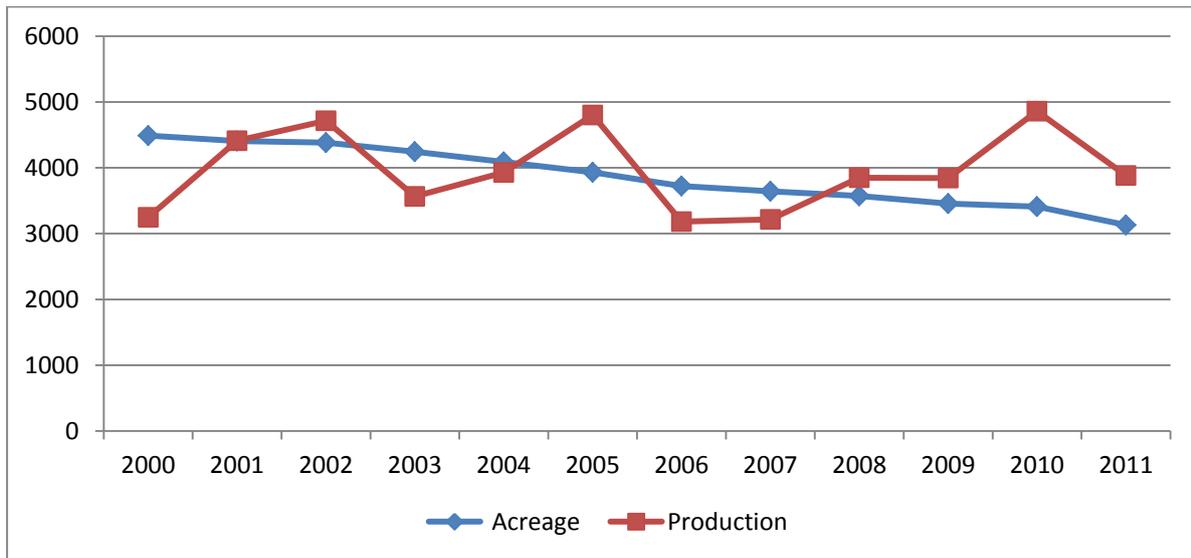
Table 9 Hops production in the Czech Republic

	2000			2002			2004		
Hops growing region (variety)	Acreage (ha)	Production (t)	Average yield (t/ha)	Acreage (ha)	Production (t)	Average yield (t/ha)	Acreage (ha)	Production (t)	Average yield (t/ha)
SAAZ – PDO (Saaz region)	4489	3247.1	0.723	4383	4716.4	1.8	4090	3930	0.96
Saaz region (all varieties)	4617	3494.1	0.757	4587	5027.8	1.1	4382	4435.5	1.1
SAAZ - all regions CZ	5913	4531.7	0.766	5639	5992.3	1.6	5407	5518.6	1.2
CZ total	6095	4864.8	0.798	5968	6442	1.8	5838	6310.7	1.8
	2006			2007			2008		
Hop growing region (variety)	Acreage (ha)	Production (t)	Average yield (t/ha)	Acreage (ha)	Production (t)	Average yield (t/ha)	Acreage (ha)	Production (t)	Average yield (t/ha)
SAAZ – PDO (Saaz region)	3722	3181.6	0.85	3642	3215.5	0.88	3572	3848.49	1.08
Saaz region (all varieties)	4044	3645.5	0.9	4006	3891.8	0.97	3963	4576.54	1.16
SAAZ - all regions CZ	4926	4717.9	0.96	4840	4563.4	0.94	4748	5563.14	1.17
CZ total	5414	5453.4	1.1	5389	5630.6	1.4	5345	6752.79	1.27
	2009			2010			2011		
Hop growing region (variety)	Acreage (ha)	Production (t)	Average yield (t/ha)	Acreage (ha)	Production (t)	Average yield (t/ha)	Acreage (ha)	Production (t)	Average yield (t/ha)
SAAZ – PDO (Saaz region)	3456	3845	1.11	3410	4860	1.43	3132	3884	1.24
Saaz region (all varieties)	3899	4613	1.18	3831	5620	1.47	3517	4556	1.3
SAAZ - all regions CZ	4627	5395	1.25	4557	6569	1.47	4040	5020	1.25
CZ total	5307	6616	1.25	5210	7772	1.49	4632	6088	1.31

Source: Hop Growers Union CZ, 2013.

*CZ - Czech Republic

Figure 2 Acreage and production of SAAZ (ha, t)



Source: Ceska Zemedelska Universita V Praze (CULS).

Since 2000 the total cultivated area of hops in the Czech Republic decreased by 1,463 ha and the Saaz area went down by 1,357 ha (a part of the cultivated area was replaced by new Czech hops varieties). The cultivated area reached its historical minimum in the Saaz and “Ústěk” regions in 2011. The decreasing trend started in the mid-nineties. The main reasons were the low price (see Table 16) and the increasing costs of hops production. The age structure of stands of hops and the long-term negative development of the Czech exchange rate are other important factors. The only positive factor is that the decline in the variety Saaz was recorded mainly on hop-field stands with an age of more than 20 years and the hop-fields with the lowest yields per hectare. The investment strategy of producers is the recovery and the stabilization of Saaz areas.

According to the Central Control and Testing Institute of Agriculture, which is in the Czech Republic in charge of the certification of hops, hops is harvested in a total of 209 municipalities (132 in Saaz hop region, 47 in the Ústěk growing region and 30 in Tršice growing region).

The evaluation of the hops production and trade characteristics are based on total figures since the detailed formation on Saaz hops from the Saaz region is not available. However, the ratio of PDO Saaz in total production is very high and constant in time, it represents about 60-70% (see Table 10).

Table 10 SAAZ ratio in total CZ hop production, in %

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
SAAZ (PDO)	66.75	66.64	73.21	64.51	62.28	61.34	58.34	57.11	56.99	58.12	62.53	63.80

Source: Hop Growers Union CZ, 2013.

Table 11 provides information on a majority share of Saaz hops on a hops certification.

Table 11 Certification of hop

Certification of hops	Provenance	Granule (45 and 90)	Pressed hops	Unprepared hops
8/2005 - 7/2006	Czech	4 640	334	2 168
	Other	365	0	0
8/2006 - 7/2007	Czech	3 803	158	1 257
	Other	260	0	0
8/2007 - 7/2008	Czech	3 889	274	1 214
	Other	214	0	0
8/2008 - 7/2009	Czech	4 507	243	1 453
	Other	94	0	2
8/2009 - 7/2010	Czech	4 690	281	1 310
	Other	127	0	0
8/2010 - 7/2011	Czech	4 868	253	1 598
	Other	25	0	0

Source: Situation Reports 2012, MA CZ.

2.2.3 Trade

More than three quarters of Czech hops are exported, a pattern which has persisted over many years. Moreover, hops are a very important item within Czech agrarian foreign trade. In 2012, the exported amount, according to Czech Statistical Office (CSO), reached 4,148 tons (PDO hops account for approximately 80%). 78% of the export represents pellets. The remaining part is dried hops. Considerable export growths were recorded to following countries: Russia, Germany, Vietnam, the United Kingdom or interesting destinations such as Peru and Zimbabwe.

Table 12 Hop import

Import (t)/year	2006	2007	2008	2009	2010	2011
Hop cones, uncrushed	519.4	517	298.6	130.5	88.9	11.2
Hop cones crushed, granulated, enriched lupulina	65.6	172.3	75.3	90.9	75.1	87.5
Hop cones crushed, granulated, others	156.2	315	272.2	201.6	119.2	109.1
Hop total	741.2	1004.3	646.1	423	283.2	207.9
Extract	69.8	214.6	180.6	145.8	121	169.7

Source: Situation Reports 2012, MA CZ.

Table 12 provides information on the hops import. The share in the balance of foreign trade is very low and is going down. The strong decreasing trend of hops import started in 2007 (see table 12). The import declined from about 1,000 tonnes in 2007 to 200 tonnes in 2011.

Export of hops (Table 13) is significantly higher than imports. The exported amount slightly increased between 2006 and 2011 and reached a level of above 4,200 tonnes in 2008.

Table 13 Hop export, in tonnes

Export/year	2006	2007	2008	2009	2010	2011
Hop cones, uncrushed	363.6	205.8	242.1	953.5	1,217.5	936
Hop cones crushed, granulated, total	3,707.1	3,222.3	4,040.7	3,291.00	3,220.6	3,214.1
Hop, total	4,070.7	3,428.1	4,282.8	4,244.5	4,438.2	4,150.1
Extract	10	36.6	23	6.5	19.9	47.5

Source: Situation Reports 2012, MA CZ.

The majority of hops, or hops products, hop pellets type 90 and type 45, (1,160 t) was exported to Japan in 2012 (see Table 14). All major Japanese brewing companies import certified Czech hops. More than one half of hops exports went to the Asia region. In total almost three quarters of exports went to the non-EU countries. Only one quarter were exported to the EU Member States.

Table 14 TOP 10 destinations of Czech hops in 2012

Rank	Country	Export, in tonnes
1.	Japan	1.160
2.	Germany	957
3.	China	829
4.	Russian Federation	526
5.	Vietnam	124
6.	UK	118
7.	Belgium	88
8.	Peru	70
9.	India	30
10.	Ukraine	29

Source: Hop Growers Union, 2013.

The order of ten largest customers of Czech hops changes annually except of the first four countries. Other major customers of Czech hops are South Africa (26 t), Zimbabwe (23.4 tons), Slovakia, Australia, USA, Uzbekistan, Canada, Colombia and others (Table 15). Portfolio of countries, where the Czech hops is exported, shows that despite tough competition in the market, there is still demand for high quality Czech gently aromatic Saaz hops even if its price is relatively high. The export went for example to countries like Zimbabwe, Sudan, Chile, Korea and the Kingdom of Lesotho (Hop Growers Union, 2013).

Table 15 provides information about the total territorial structure of exports.

Table 15 Development of hop export by destination, in kg

Export of hop Country/year	2006	2007	2008	2009	2010	2011
Japan	1 996 920	1 750 470	1 549 480	1 793 081	1 830 670	1 196 750
Germany	648 327	942 694	1 345 443	947 766	1 064 920	896 794
China + Hong Kong	237 620	253 440	235 565	432 180	505 672	847 080
Russian Federation	322 245	251 170	180 791	257 440	243 890	307 859
Belgium	126 045	64 252	120 426	84 846	48 083	99 110
Vietnam	29 170	62 120	68 450	93 990	144 044	86 020
United Kingdom	273 547	127 329	114 624	59 949	90 992	79 943
South Africa	58 550	113 050	88 610	127 100	60 480	45 100
Italy	17 684	44 358	3 391	1 400	83 800	44 150
Peru	10 300	0	2 520	43 080	30 890	41 360
Other Countries	723 243	651 413	601 449	296 926	213 159	236 290
Total	4 443 651	4 260 296	4 310 749	4 137 758	4 316 600	3 644 166

Source: Situation Reports 2012, MA CZ.

Table 16 shows long-term development of the average price of hops, which is together with the foreign trade price and climatic factors the most important determinant of the hop production. The long-term development of farm prices is a slightly increasing; however, prices between 2010 and 2011 are below those in nineties.

Table 16 Agricultural producer prices for hops

Period	1996	1997	1998	1999	2000	2001	2002	2003
Agricultural producer price (CzK/t)	142,771	120,039	123,864	132,068	133,603	134,121	107,690	118,113
Period	2004	2005	2006	2007	2008	2009	2010	2011
Agricultural producer price (CzK/t)	130 708	120 347	129 579	149 524	200 521	170 042	124 623	129 568

Source: Situation Reports 2012, MA CZ.

2.3 Conclusions

New trends are becoming apparent in the domestic brewing industry, which could signal long-term changes on the beer market. Let us point out some of them:

- We can expect that beer consumption will shift from heavy beer drinkers to a larger group of consumers and lower per-capita consumption.
- As consumers become better informed and more demanding, the variety of sold beer will increase. Breweries, from the smallest to the largest ones, will respond to this trend and broaden their offerings.
- The vast majority of consumers will continue drinking bottom fermented Pilsner-style beer.
- Beer will remain the most popular drink in the Czech Republic but it will gradually lose its cheap-drink label.

- The variety of special and unconventional beers will continue to increase.
- Diversification of beer types and brands will improve the prestige of beer, which will be more attractive for those who have avoided it because of its cheap-drink image, among other reasons.
- The prestige of beer as a high-quality, natural and healthy drink will grow.

The above mentioned conclusions were highlighted in “Brewing and malting industries in 2011 – results and trends”, by Ing. Jan Vesely (Czech Beer and Malt Association).

Problems related to production and trade

As regards production and trade, the biggest problem of Czech PDO hops and hop in general for the future is a high proportion of old stands of hops and a higher proportion of old structures for growing hops (see Table 17). Unfortunately, on the other hand, there is insufficient replacement, probably due to high investment cost, which cannot be for the current level of market prices, cover by profit margins farms. From this perspective, it seems necessary to be providing specific support, which would contribute to the restoration of production areas of an important export product.

Table 17 Age of hop

The period of stand establishment	Stand age	Saaz	%	Auscha	%	Tirschitz	%	Total in CZ	%
-1991	20 and more	989	28.1	193	36.8	19	3.2	1 201	26
1992-1996	15-19	287	8.2	41	7.8	166	28	494	10.7
1997-2001	10-14	953	27.1	88	16.8	311	52.5	1 352	29.1
2002-2006	5-9	559	15.9	89	17	41	7	689	14.9
2007-2011	till 5 y.	728	20.7	113	21.6	55	9.3	896	19.3
Total (20.08.2011-ha)		3 516	100	524	100	592	100	4 632	100

Source: Situation Reports 2012, MA CZ.

An interesting possibility for further development is the use of growing domestic and foreign brewery groups' demand for organic hop production.

Organic hop growing in the Czech Republic

The beginning of organic hop growing in the Czech Republic dates back to 2009. However, the first Czech “organic hops” were grown as early as the mid-1980s in cooperation between the Hop Research Institute and the Entomological Institute of the Czechoslovak Academy of Sciences. In the years 1983 and 1985, the growers succeeded in cultivating hops in an experimental hop field with an area of 0.9 hectares without applying pesticides. After 2005, breweries, and in particular smaller and restaurant-owned breweries, recorded a higher demand for organic hops as organic food and drinks were gaining popularity. Czech stores sell only imported organic beer brands of inferior quality (?). Organic beer can undoubtedly be considered an interesting market product. Organic hop growing started in 2009 based on an agreement between the first growers and the Hop Research Institute in Žatec, which became the coordinator for agro-technical measures and interventions protecting hops

against diseases and pests in hop fields operating in the organic farming mode. As of December 31, 2011, a total of 10.6 hectares of hop fields were registered at the Ministry of Agriculture as operating under the transitional period mode. The transition takes three years in hop fields and it is a prerequisite for organic certification. In 2009, one hop grower from the Tirschitz hop growing region (4.9 hectares) and two growers from the Žatec (Saaz) region (3.5 hectares in total) entered the transitional period. All three growers cultivate the traditional Saaz variety. In May 2011, they were joined by another grower, the Hop Research Institute in Žatec. The first harvest of officially certified Czech organic hops took place in August 2012. As a result, certified production from 8.34 hectares is available this year, in addition to the production from 2.2 hectares undergoing the transitional period. The controlling organization is Biokont CZ, s.r.o.

2.4 References

- Act. No. 242/2000 Coll., on organic farming and amendments to Act. No. 368/1992 Coll., on administrative fees, as amended.
- Bioinstitut (2012): Yearbook 2011 Organic Agriculture in the Czech Republic. Ministry of Agriculture CR, Prague. 90 p. ISBN 978-80-7434-080-2.
- Federation of the Food and Drink Industries of the Czech Republic (2010): Analýza trhu s biopotravinami v České republice (Analysis of organic food market in Czech Republic). [on-line] [cit. 2013-07-06] URL: < <http://www.bioinstitut.cz/argumenty.html> >.
- Institute of Agricultural and Economics Information (IAEI) (2013, 2012): Statistická šetření ekologického zemědělství – Zpráva o trhu s biopotravinami v ČR (Statistical survey of organic farming – Report of Czech bioproducts market). [on-line] [cit. 2013-07-04] URL: < <http://eagri.cz/public/web/mze/zemedelstvi/ekologicke-zemedelstvi/biopotravy/> >.
- Ježek, J. (Ing.), Vostřel, J. (Ing.); Krofta, K. (CSc. Ing.); Klapal, I. (Ph.D., Ing.) (2013): Milestone in Czech hop growing: harvest of the first Czech organic hops. Hop Research Institute, Žatec.
- Ministry of Agriculture CR (MAG CR) (2010): Action Plan for Organic Farming 2011-2015. Ministry of Agriculture CR, Prague. 90 p. ISBN 978-80-7434-007-9.
- STEN/MARK (2010): Povědomí a nákupní chování spotřebitelů v oblasti biopotravin (Awareness and purchase behavior in organic products issue). [on-line] [cit. 2013-07-04] URL: <http://www.bio-info.cz/bio-akademie/povedomi-a-nakupni-chovani-spotrebitelu-v-oblasti> >.
- Václavík, T., Čítková, Z., Bystřická, Š. (2008): Český trh s biopotravinami 2008 (Czech Trade of Organic Food 2008). Green Marketing, Moravské Knínice.
- Vesely, Jan (Ing.) (2011): Brewing and malting industries in 2011 – results and trends, Czech Beer and Malt Association
- WEB pages**
- Czech National Bank (CNB): Exchange rates - monthly averages. [on-line] [cit. 2013-08-05] URL:<http://www.cnb.cz/cs/financni_trhy/devizovy_trh/kurzy_devizoveho_trhu/prumerne_mena.jsp?mena=eur>.
- Czech Statistical Office (CSO): Consumer Price Indices – Cost-of-Living. [on-line] [cit. 2013-08-05] URL: <http://www.czso.cz/csu/redakce.nsf/i/isc_cr>.
- Hop Growers Union of the Czech Republic, on-line: <http://www.czhops.cz/index.php/en>

Program rozvoje venkova České republiky na období 2007-2013 (Czech Rural Development Programme 2007-2013). [on-line] [cit. 2013-08-08] Ministry of Agriculture CR, Prague. URL:< http://eagri.cz/public/web/file/193481/PRV_aktualni_schvalene_zneni.pdf>.

Základní statistické údaje ekologického zemědělství (Basic statistical data of organic farming). [on-line] [cit. 2013-07-04] URL: < <http://eagri.cz/public/web/mze/zemedelstvi/ekologicke-zemedelstvi/statistika-a-pruzkumy/>>.

3 Germany

Inna Levkovich, Heinz Hockmann

3.1 Organic food market in Germany

3.1.1 Implementation

In Germany, the conditions and requirements of green farming are primarily regulated by the Öko-Landbaugesetz (ÖLG)². This law completes and refines the EU regulations and includes special executive duties regarding the control of conditions and requirements of green farming (BMELV 2013).

The national legal basis for financial support of organic production is set in the “GAK-law”. GAK stands for “Gemeinschaftsaufgabe: Verbesserung der Agrarstruktur und des Küstenschutzes”³ and defines national priorities as well as decides about available measures and the distribution of financial support for agricultural improvements. 60% of the financial support for organically producing farms is granted by the Federal Government and 40% by the federal state⁴. In 2011, 143 million EUR were spent as public expenditures to support the production of organic agricultural goods (BMELV, 2013).

The subsidies are particularly granted for the conversion as well as the maintenance of green farming and paid per ha of organic cultivated area. The amount of subsidies differs among the federal states and depends partly on the year of the green engagement. The payments for conversion amount to between 210 EUR per ha for arable land and well as grassland and 480 EUR per ha for vegetables. For maintenance, payments are 300 EUR for vegetables and 170 EUR for arable land (BMELV, 2013). The federal states can raise the payments by 20% or reduce them by 30%. For the period 2014-2017, the subsidies for the conversion as well as the maintenance of organic farming can be increased by circa 10% for arable and grassland and by circa 15% for vegetables⁵.

Based on the GAK, subsidies are also granted to the processing and distribution of manufactured products derived from green farming. In 2000-2011, about 16.9 million EUR were given for this purpose (BMELV 2013).

The conversion of a single farmer from conventional to organic agri-production involves high bureaucratic burdens. Different (and partly controversial) regulations of different governmental levels (EU, German federal government, federal states) co-exist and intersect each other. Based on the German regulations for the conversion to organic farming, it is compulsory to apply “green methods” to the entire farming process. A complete transposition to organic agriculture is a compulsory pre-condition for governmental financial support in Germany (BMELV 2013). To declare oneself officially as an organic producer, one has to

² Engl.: Organic Farming Act

³ Engl.: Joint Task "Improvement of Agricultural Structures and Coastal Protection"

⁴ From 2014 on, the federal can pay subsidies 30% over or under the given amount (BMELV 2013).

⁵ See

http://www.bmelv.de/SharedDocs/Downloads/Landwirtschaft/OekologischerLandbau/OekolandbauDeutschland.pdf?__blob=publicationFile

pass random controls by public bodies (BMELV, 2013). Significant investments and personal efforts are required to fulfill the high quality standards. Farmers are required to sell organic products for a minimum of two years after the transposition (BMELV 2013). Searching for new distribution channels is a further challenge on the way to green agriculture.

3.1.2 Supply side

In 2012, 22,932 farming firms cultivated an agricultural area of 1,034,355 ha according to the EU regulation on organic production. The number of organic farms as well as the cultivated area grew by 32% from 2002 to 2012 (Table 18). In 2012, 7.7% of German farms were engaged in organic farms and they cultivated 6.2% of agricultural land.

Table 18 Organic farming in Germany 2002-2012

Year	Farms	Share (%) of all farms	Area (ha)	Share (%) of all agricultural area
2002	15626	3.6	696978	4.1
2003	16476	3.9	734027	4.3
2004	16603	4.1	767891	4.5
2005	17020	4.2	807406	4.7
2006	17557	4.6	825538	4.9
2007	18703	5.0	865336	5.1
2008	19813	5.3	907786	5.4
2009	21047	5.7	947115	5.6
2010	21942	7.3	990702	5.9
2011	22506	7.5	1015626	6.1
2012	22932	7.7	1034355	6.2

Source: own presentation based on BMELV 2013.

The basic requirements for organic farming are given by the EU regulation. The majority of German organic farms is organized in associations (e.g. Bioland, Demeter, Naturland, Biokreis, Gää etc.) which have ever higher requirements for organic farming. For example, the allowed number of animals per hectare by Bioland standards is much lower compared to EU regulations⁶. Using critical organic fertilizers like dried blood, meat and bone meal is forbidden according to Bioland standards, while the EU Regulation allows it⁷. Demeter does not allow any feed brought in from conventional production, while the EU Regulation max. 5 % conventional feed can be used for pigs (DEMETER, 2013).

The biggest organic associations in Germany (depending on the number of farms) are Bioland, Demeter, and Naturland. They associated 9,754 farms in 2012 and cultivated 468,616 ha of agricultural land. The national umbrella association is called Bund Ökologischer Lebensmittelwirtschaft (BÖLW)⁸ (BMELV, 2013).

⁶ BIOLAND standards are 140 laying hens, 280 chicken sand 10 pigs per ha while the EU regulation premises up to 280 laying hens, 580 chickens and 14 pigs per ha.

⁷ For more information please see <http://www.bioland.de/bioland/richtlinien.html>

⁸ Engl: Organic Food Industry Federation

Table 19 presents data on the production structure of organic products in Germany for selected years. The arable area as well as the production for most of the presented products has grown in the last 7 years. The highest growth is observed in the production of animal products. In 2005-2012, the production of eggs grew by 62%, poultry by 50%, pork by 46% and milk by 33%.

Table 19 Organic production structure in Germany

Crops/animal species	Unit	2005	2009	2010	2011	Share of all production in 2011	Annual growth 2005-2009 in %	Annual growth 2009-2011 in %
Arable land	1000 ha	370	415.0	435.0	435.0	3.7	2.9	2.4
Grassland	1000 ha	410	500.0	520.0	535.0	11.5	5.1	3.4
Feed/land feed	1000 ha	104.5	153.0	151.0	154.0	5.5	10.0	0.3
Legumes	1000 ha	30.0	21.9	26.5	25.5	26.2	-7.6	7.9
Cereals	1000 t	560.0	732.0	639.0	648.0	1.6	3.1	-1.2
Potato	1000 t	155.0	162.0	140.0	154.0	1.3	5.7	-0.3
Vegetables	1000 t	211.0	295.0	250.0	274.5	8.1	5.8	1.8
Fruits	1000 t	68.0	86.0	80.0	105.0	8.4	3.3	0.9
Beef	1000 t	47.5	37.1	39.5	40.5	3.6	-6.0	4.5
Pork	1000 t	12.6	22.9	22.9	23.3	0.4	16.1	0.9
Poultry	1000 t	6.7	13.6	13.5	13.5	0.8	19.3	-0.3
Milk	1000 t	440.0	545.5	595.3	657.2	2.2	5.5	9.8
Eggs	Million units	300	565	621	783	6.8	17.1	17.8

Source: Own presentation based on AMI (2012).

Despite of increasing prices for organic animal products, there are some impediments for the production growth. Because of increasing feed and protein costs and the price of land lease, it is difficult for producers to operate profitably. In 2010-2011, the producer prices for organic feed wheat in Germany rose by 5 times and amounted to 350 EUR per t (BÖLW 2013). Most of the organic feed is imported, 5% is conventional feed. In the last three years, the growth of the feed land was scarce (Table 19). Between 2009 and 2011, the annual growth of area for grassland and feed land was only 3.4 and 0.3 % respectively. The experts argue that in view of the increasing demand for domestic organic products, the growth of organic cultivated land is small. Taking into account that after 2015, 100% of organic feed should be used for the production of organic poultry and pork, the feed supply could be problematic.

Between 2005 and 2011, organic crop production (wheat, barley etc.) rose by 13.6%. In the same period a growth of 35% and 23% was observed for organic fruit and vegetable production respectively (AMI 2012).

Despite of the growth of organic production in the last years, the share compared to conventional production is still low. The share of organic poultry and pork of all production in Germany amounted to 0.8% and 0.4% respectively in 2011. The biggest constraints on

organic production growth are high costs for organic production compared to conventional products and high competition and increase of prices for land lease (BÖLW 2013).

3.1.3 Demand for organic products in Germany: Overall trends

Germany has one of the highest demands for organic products in the EU and the demand is growing. The expenses for organic products per capita amounted to 81 EUR in 2011 which is the highest per capita expense for organic products in Europe after Switzerland (177 EUR), Denmark (162 EUR), Luxembourg (134 EUR), Austria (127 EUR) and Liechtenstein (100 EUR)⁹. Between 2006 and 2011, the per capita expenses for organic products in Germany increased by 45% (BÖLW, 2013).

By sales' value, Germany reached the first place in the EU in 2012 and the second place in the world after USA. Between 1997 and 2012, the total sales' value for organic food products increased from 1.48 billion to 7.04 billion EUR.

In 2012, the organic food market amounted to 3.7% of the German food market (BMELV 2013). The German organic market shows a slower growth in the last years. Before 2010, the organic market in Germany was booming with an annual growth rate of 15%. In 2011, the sales of organic products grew by 10% and only by 6% in 2012.

The reasons for the slow down in growth in 2011 were higher prices and quantities produced (especially by animal products) as well as the increased demand. Because of food scandals, like dioxin in feedstuff, EHEC, coli bacteria in conventional vegetables, the consumers' awareness to buy organic products is rising. Table 20 presents the distribution of organic sales by products in 2012. In 2011-2012, the highest growth rates by sales were reached by meat substitutes, meat and poultry. This trend seems to be influenced by food scandals in Germany 2011¹⁰. Organic meat substitutes, baby food, eggs and cereals are the main organic products by sales.

⁹ Average expense per capita for organic products in Europe amounted in 2011 27 EUR (BÖLW, 2013).

¹⁰ Dioxin in conventional feedstuff and EHEC.

Table 20 Product sales of German organic market and change in sales' value

	Products	% of total sales 2012	% change in sales 2011-2012
1	meat substitute	68.4	27.7
2	baby food	42.0	9.0
3	eggs	14.1	2.3
4	cereals/Muesli	13.8	11.1
5	potatoes	9,6	-0.8
6	spreads	8.5	8.2
7	vegetables	8.2	5.0
8	fruit	6.5	3.6
9	milk & dairy	6,0	5.9
10	bread & bakery	5.9	3.0
11	pasta, rice	3.7	5.2
12	cheese	3.7	-3.3
13	hot beverages	3.5	9.7
14	fats (butter & oil)	3.3	10.8
15	confectionaries	2.3	5.7
16	meat & poultry	2.2	18.0
17	alcoholic beverages	1.8	14.2
18	beverages (alcohol free)	1.7	-5.2
19	frozen food	1.4	8.3

Source: AMI 2013, BMELV (2013).

Table 21 details the share of organic sales by different distributors. The supermarkets and discounters with a market share of 50% are the main suppliers of organic food. The share of natural food stores amounted to 31%. They supply mainly regional produced organic food and "dry products".

Table 21 German organic sales by marketing channel

Marketing channels	Sale value, in billion EUR		% change 2011-2012	Share in 2012
	2011	2012		
Natural food stores ¹	2,07	2,21	7,0	31,0
Supermarkets ²	3,32	3,52	6,0	50,0
Others ³	1,25	1,30	4,0	19,0
Total	6,64	7,04	6,0	-

¹ incl. big farmer`s shops (Hofläden)

² incl. discounters, drugstores

³ incl. butchers, bakeries, fruit and vegetable stores, direct sales, farmer`s markets, online shops

Source: BÖLW (2013).

Direct sales from farms amounted to only 19%. After the negative press and TV campaign by animal rights activists showing the bad situation in big organic poultry and pig farms in autumn 2012, animal keeping has become an important theme in the media. This made consumers more aware of animal keeping and pushed organic spending in direct sales and organic stores.

The main reasons for buying organic food are “safety” and “health”. Consumers of environment-friendly innovations are to a high degree novelty seeker (Janssen et al. 2012). However, a ZMP study (2002) showed that premiums for organic food are accepted due to the affordable price-quality-ratio, as long as the higher price amounts to not more than 20%. Above that, the willingness to pay shrinks. Additional costs (surcharges) are rather accepted for cheaper products than for expensive ones due to the absolute lower costs. The average German consumer is used to the very low price level in discounter markets (high price sensitivity).

Brändli (2005) also indicated that higher prices are the prime reason for low, but nevertheless increasing market share. Still half of consumers never buy any organic food products; one third buys organic products at least occasionally. In Germany, each supermarket and discounter offers (even if not a big assortment) organic products. This marketing strategy gives the consumers the possibility to buy organic products daily. Thus, the chance to reach of the above-mentioned consumers is much bigger.

Currently we see the general attitude shifting towards a more sophisticated one concerning organic products. Being ecologically oriented is becoming more and more popular in German society. Therefore an increase of sale volumes is thought to be realistic. However, Brändli (2005) argues that among Germans, particular “ideological barriers” against organic products exist, and the entire “bio-sector” is considered to be “too alternative”. This slightly negative perception could turn into the opposite soon.

3.1.4 Trade

Trade data for the organic sector of Germany is not available. However, based on the study of Köpke and Küpper (2013), it could be concluded that Germany is a net importer of organic products. The import share of organic products varies, depending on the product, and, for example in 2012, accounted to 82% for fruits and 43% for fresh vegetables (Table 22).

Table 22 Import share for organic products in Germany

Products	2004	2010	2012	Trend
Fruits	74	79	82	↑
• Apples	39	41	-	→
• Pears	72	82	-	↑
Vegetables	35	41	43	↑
• Carrots	40	35	40	→
• Tomatoes	53	76	52	↑
• Cucumbers	43 ¹	47	-	↑
Potatoes	12	20	-	↑
Eggs	15 ¹	16	-	→
Milk	6 ²	16	-	↑
Pork	13 ²	22	-	↑

¹ data for 2008

² data for 2001

Source: based on Köpke and Küpper (2013)

From 2004 to 2010, the import share for organic products increased on average by 40%. For example in this period the import share for apples increased by 5% and for potatoes by 67%. Further increases in imports are expected for most of the products (Köpke and Küpper, 2013). In view of the high import share of organic fruits and vegetables, there is a big market potential for German producers in regards to these organic products.

3.2 PDO, PGI and TSG: adoption and diffusion at the Germany agri-food market

3.2.1 Implementation

The application-procedure in Germany at the national level is regulated by the German Patent and Trademark Office (DPMA) which underlies the Ministry of Justice and not the Ministry of Agriculture like in other EU member states (especially France and Italy). Only producer associations can fill in a patent application after defining proceeding or growing standards, special ingredients and recipes, as well as giving reference to the geographical indications. The application fee at the DPMA is currently 900 EUR (DPMA, 2013). Before it is approved to be passed to the EU level, the national examination of the application takes on average 3 years (CBE, 2013). Then it is followed by the EU application process that can take another couple of years.

3.2.2 Supply side

The registration and protection of Geographical Indications (GI) is split into four segments: agricultural products and foodstuff, wines, spirits and aromatized wines. In Germany 166 registered GIs exist. The Bacchus Database shows that Germany had 201313 PDOs and 26 PGIs on wines, 34 geographical indications (GI) for spirits and 2 GIs for aromatized wines.

In July 2013 Germany had 91¹¹ registered agricultural and foodstuff products under the EU quality schemes “protected designations of origin PDO” (30) and “protected geographical indications PGI” (61), respectively. In terms of registrations Germany is ranked 6th, behind Italy (254), France (200), Spain (164), Portugal (118) and Greece (99). Another 29 products are currently in the application process. There are no German products protected by the “Traditional Specialty Guaranteed” (TSG) scheme.

The most important groups of protected products in terms of registration-numbers are meat products (14 products), fruit and vegetables (14 products), beers (10 products), natural mineral waters and spring waters (23 products)¹². By sales turnover beer and meat products are ahead with 66% and 21%, respectively¹³. Within Germany the registration numbers differ highly among the federal states, where the southern part clearly dominates. Bavaria for example counts 26 registrations of “agricultural products and foodstuff”¹⁴, of which 6 are beer products, and other 15 are still in the application-procedure. The next main producer is Baden-Wuerttemberg with 13 registrations¹⁵, followed by Thuringia (6), of which 5 are meat products¹⁶.

Registration activity was not continuous since the first EU regulation “On the protection of geographical indications and designations of origin for agricultural products and foodstuffs” 1992 (Council Regulation (EEC) No 2081/92 of 14 July 1992). The highest registration activity was observed in 1996-1999 and 2010-2013 (Table 23).

Table 23 Number of fully registered Geographical Indications for Germany by type of scheme and years, number

Years	PDO	PGI
1996-1998	14	15
1999-2001	0	5
2002-2003	0	8
2004-2006	0	0
2007-2009	0	9
2010-current	1	25

Source: own presentation based on DOOR database

In these periods, 29 and 26 agricultural products and foodstuff respectively were registered according to the EU quality schemes.

¹¹ DOOR database.

<http://ec.europa.eu/agriculture/quality/door/list.html;jsessionid=pL0hLqqLXhNmFQyF11b24mY3t9dJQPflg3xbL2YphGT4k6zdWn34!-370879141>.

¹² EU quality schemes registration and protection for Mineral Waters will be phased out at the end of 2013.

¹³ EU Data for 2010, Country files, http://ec.europa.eu/agriculture/quality/schemes/index_en.htm.

¹⁴ Based on the website: <http://www.spezialitaetenland-bayern.de/herkunftsschutz/geschuetzte-produkte/>.

¹⁵ Based on the website: <http://www.wuerttembergweb.de/detail/artikel/315-spezialitten-aus-dem-Indle.html>.

¹⁶ Based on the website: <http://www.agrarmarketing.thueringen.de/index.php?id=15>.

One of the reasons for the low registration activity in Germany may be bureaucratic hurdles. The application procedure for German producers is rather long and characterized by high transaction costs. These include costs for initial information, legal consulting, application and negotiation costs on country and EU level, control within protection community, consultation and communication with regional producers etc. (Benner et al., 2008; vgl. Lippert, Thidig, 2001). The judicially and bureaucratically complex and long application process is often the reason for withdrawing the application (Trofimtseva, 2012; Wirsig et al., 2010). For example, the “Lüneburger Heidekartoffel” got the EU label “Protected Geographical Indication” not until after 6 years of the application procedure (Raiser, 2012) and the application process of “Schwäbische Spätzle/Schwäbische Knöpfe“ took 7 years until it was published in the Official Journal of the European Union as PGI (Tress, 2012)¹⁷.

According to the constitutional distribution of competences in the Federal Republic of Germany not BMELV¹⁸ but the federal states are responsible for assistance and financial support of producers by application procedure and registration of GIs. Every federal state offers different assistance for better marketing of regional products. For example in North Rhine-Westphalia the State Office for Nature, Environment and Consumer protection supports the foundation of protection-communities and the application-procedure of PDO/PGI. 50% of the consulting costs, planning measures and market research for the certification of special characteristics of the products are subsidized by the State Office (LANUV-NRW, 2012).

In Bavaria, the federal state with most of the registered products, the registration of regional products is to be promoted via new interest-groups¹⁹. There are many platforms of associations like weltgenusserbe.de²⁰, spezialitaetenland-bayern.de, cluster-bayern-ernaehrung.de and others²¹. These platforms provide information to consumers as well as to producers about the EU quality system, the application-procedure and protected regional products using regional product database etc.

Despite the rather small number of geographical indications in comparison to other EU countries (5% of all GI registrations in the EU-27) Germany's sales volume within the EU member states is relatively high. Germany is listed third in terms of sales of GI products after France and Italy (Tanguy et al, 2012). During the period 2005-2010 the sales volume for all geographical indications increased from 3.0 billion EUR to 3.4 billion EUR, which is equal to an overall growth of round 11%²². The highest growth for this period was observed for meat

¹⁷ An overview of the Bavarian products, which are currently in the application-procedure, shows that some are waiting for final approval now for more than 8 years (e.g. “Bayerischer Obazda”), http://www.spezialitaetenland-bayern.de/fileadmin/user_upload/images/3_0_Spezialitaetenland/3_3_Herkunftsschutz/Liste_Geo_Produnkte_Bay_Anmeldeverfahren_140513.pdf.

¹⁸ Engl. Federal Ministry of Food, Agriculture and Consumer Protection

¹⁹ Information on the kind of support is quite diffuse.

²⁰ The platform is funded by the European Union.

²¹ The association HAL (Herkunftsschutz für Agrarerzeugnisse und Lebensmittel engl. Protection of origin for agricultural products and foodstuffs) was founded in 2010 in Munich to facilitate the procedure of application for producers.

²² Own calculations based on the Annex Fact Sheet: Value of the GI by member state (=Germany), http://ec.europa.eu/agriculture/external-studies/value-gi_en.htm.

products (43%) and cheeses (19%), while sales' volume for sea products showed a threefold decrease.

The share of German GI in national food and drink industry accounts 3.8% and is relatively small compared to the "leaders of GI" France and Italy. The GI sector in France and Italy in 2010 amounted 14.5% and 9.5% for food and drinks sectors, respectively.

The domestic market remained the most important one for German GI products. In 2010 88% of all GI products were sold at domestic markets, while 9% were traded within the EU and only 3% went to extra-EU markets. In comparison with the average EU-level, the share of exports of German GI products is small. In 2010 the share of the intra-EU trade of GI products of EU member states reached 20.4%. 19.5% of GIs were sold to extra-EU markets, while 60.1% were traded within the domestic markets (Tanguy et al., 2012).

Value Premium Rate for GI

Tanguy et al. (2012) also analyzed the price difference of products under GI protection and equal non-GI products. This rate is highest for wines and spirits (2.75 and 2.57), while agricultural products and foodstuff reach only a premium value of approximately 1.55. The most important product for Germany is beer (95% of total value sales of beer) with a value premium rate of 1.65. Within the sector of agricultural products and foodstuff, 14.2% accounts for German beer out of EU sales value, and it is therefore ranked 2nd behind Italian Cheese products. In terms of wines Germany is ranked 4th respectively with a share of 7.5% in the wine value and a premium rate of 1.88. Here the certification PDI dominates the certification PGI (in contrast to other wine-producing countries under GI schemes as for example France (Tanguy et al., 2012)).

3.2.3 Demand side

Zühlsdorf et al (2013) in their study analyzed the clarity of food labeling. The results indicate that knowledge about the origin of a product is very important for German consumers. However the labeling and packaging concerning the origins are often misunderstood by consumers. There are many different attributes of origin on the packaging (regional product, specific place of origin in the product name, EU geographical indication) and these induce different associations by consumers. For example, if the place is part of the product name, for 80% of the consumers it means that the product should have been made by using a traditional receipt. However, more than 60% of the respondents are not sure if the product is produced in the declared region.

The survey results show that consumers put high requirements on products with the label „from our region“. 70% of the consumers expect that the product is produced by traditional recipe and 50% of the consumers expect that raw material comes from the home region and that the production will be carried out in this region. That corresponds more with the understanding of PDO (protected destination of origin).

In most cases the consumers don't recognize different protection levels of EU geographical indications and don't observe the protected geographical indication labeling on the packaging of products. As Zühlsdorf et al. (2013) found out, these expectations vary in some extent with the specific product. Comparing three types of cheese in respect with the place name in the

product name the respondents were above all more convinced that it referred to a traditional recipe (around 75%) than to the location and origin of production (30-45%), which is part of the EU quality scheme. This shows low clarification about the meaning of geographical indications. These results confirm empirical study of Buxel, H. and Schulz, S. (2010), that the consumers' level of awareness of EU origin labels is low²³.

The results of the study indicate that a clear and reliable communication between supplier and consumer in terms of quality attributes and labeling is missing. For many consumers it is difficult to identify quality based on the label information. Because of different food scandals the skepticism of consumers concerning quality labels is growing. 47% of the interviewed persons said that label information is not useful for identifying product quality as a basis for purchase decision. All of quality attributes (regional product, specific place of origin, EU geographical indication) confuse consumers. This leads to a general distrust of labels especially in regards of quality-oriented consumers, who get more and more critical about the labels, which can be called as "trust erosion" (Zühlsdorf et al., 2013: 45). In this situation it is more difficult for producers to promote a product via PDO or PGI certificates and get the higher value premium rate.

The low awareness of GI by consumers on the domestic market finds its expression in the potential of GI products at the international markets. Only a small numbers of German GI products are internationally known. Thus, the marketing strategy should be oriented first of all on the domestic market and increasing awareness of consumer for regional specialties vs. geographical indications. The consumers' awareness of labeling and different protection levels of EU geographical indications should be promoted.

3.3 Conclusions

Germany has the largest market of organic products in Europe by sales value and it has 6th place by sales value per capita. The organic food market amounted 3.7% of the German food market in 2012. The production of organic products in Germany is growing; however, the production growth slowed down in the last years. The highest production growth is observed by eggs, meat products, fruits and vegetables. The consumer's demand on organic products in Germany is increasing and offers good chance for the national organic producers.

The GI protection is obviously very important in the premium sector of food and beverages especially for alcohol containing beverages as beers, wines and spirits. For Germany, beer is the most important product group for domestic and international markets.

On the supply and demand side there are some reasons why the initiative for registration of protected products in Germany is low: the time-consuming and complex system of application and low confidence in and recognition of the labels on part of the potential buyers. Other reasons might be low interest from large-scale enterprises and producer associations that represent these large enterprises.

²³ According to their study only 12.8% recognized the official EU label for PDO (Buxel and Schulz, 2010).

3.4 References

- AMI (2012): AMI Markt Studie – Strukturdaten im ökologischer Landbau in Deutschland 2011 (Structure of organic food production in Germany 2011), http://www.ami-informiert.de/fileadmin/redaktion/bio_daten/strukturdaten/Strukturdaten_und_Verkaufserloese_2011_PDF.pdf
- Benner, E.; Profeta, A.; Wirsig, A. (2008): Die EU-Übergangsregelung zum Herkunftsschutz bei Agrarprodukten und Lebensmitteln aus dem Blickwinkel der Transaktions- und der Informationsökonomie. Vortrag anlässlich der 48. Jahrestagung der GEWISOLA, Bonn., <http://ageconsearch.umn.edu/bitstream/52644/2/benner.pdf>.
- BLE (2012): Bundesanstalt für Landwirtschaft und Ernährung, Strukturdaten zum ökologischen Landbau für das Jahr 2011. Bonn. Online unter: http://www.ble.de/SharedDocs/Downloads/04_Programme/01_Oekolandbau/ZahlenOekolandbau2011.html, zuletzt 15.7.13
- BMELV (2013): Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, Ökologischer Landbau in Deutschland, <http://www.bmelv.de/SharedDocs/Standardartikel/Landwirtschaft/Oekolandbau/OekologischerLandbauDeutschland.html>
- BÖLW (2013): Bund Ökologischer Lebensmittelwirtschaft, Zahlen, Daten, Fakten – Die Bio-Branche 2013, http://www.boelw.de/uploads/media/pdf/Dokumentation/Zahlen__Daten__Fakten/ZDF_2013_Endversion_01.pdf, in German.
- Brändli, C. (2005): Pricing of bio-products in food-retail sector – an international comparison (Preisgestaltung von Bioprodukten im Lebensmittelhandel – Ein internationaler Vergleich), <http://www.sustainability.wi.tum.de/fileadmin/w00bge/www/Artikel/db5.pdf>
- Buxel, H.; Schulz, S. (2010): Akzeptanz und Nutzung von Güte- und Qualitätssiegeln auf Lebensmitteln. Ergebnisse einer empirischen Untersuchung. Münster.
- CBE (2013) Cluster-Bayern-Ernährung : EU Herkunftsschutz für bayerische Spezialitäten. Cluster-Ernährung Bayern, Kulmbach, <http://www.cluster-bayern-ernaehrung.de/regionalitaet/herkunftsschutz/>.
- Demeter (2013): Demeter-International E.V Production Standards For The Use Of Demeter, Biodynamic And Related Trademarks, June 2013, <http://www.demeter.net/sites/default/files/DI%20production%20stds%20Demeter%20Biodynamic%2013-e.pdf>
- DPMA (2013): Deutsches Patent- und Markenamt: Merkblatt über den Schutz von geografischen Angaben und Ursprungsbezeichnungen für Agrarerzeugnisse und Lebensmittel gemäß der Verordnung (EU) Nr. 1151/2012 (vormals Verordnung (EG) Nr. 510/2006), Deutsches Patent- und Markenamt, München, <http://www.dpma.de/docs/service/formulare/marke/w7729.pdf>.
- Janssen, M.; Zander, K. und Hamm, U. (2012): Präferenzen und Zahlungsbereitschaft deutscher Verbraucher bei Öko-Wein. Universität Kassel, Fachbereich Ökologische Agrarwissenschaften, D-Witzenhausen, Fachgebiet Agrar- und Lebensmittelmarketing

- Köpke, U., Küpper, P.M. (2013): Marktanteile im Segment Bio-Lebensmittel: Folgen und Folgerungen, Studie, Institut für organischen Landbau Universität Bonn, http://www.iol.uni-bonn.de/pdf/IOL-Studie_Marktanteile_%20im_Segment_Bio-Lebensmittel.pdf
- Landesamt für Natur, Umwelt und Verbraucherschutz Nordrhein-Westfalen (LANUV-NRW) (2012): Fördermöglichkeit des Landes NRW, Recklinghausen, <http://www.lanuv.nrw.de/agrar/regionalvermarktung/lebensmittelspezialitaeten/foerderung.htm>
- Lippert, C.; Thiedig, F. (2001): Staatliche Förderung geographischer Herkunftsangaben für Lebensmittel und Agrarprodukte – Wohlfahrtstheoretische Analyse und Implikationen für WTO-Verhandlungen. In: Brockmeier, M.; Isermeyer, F.; Cramon-Taubadel (Hrsg.) (2002): Liberalisierung des Weltagrarhandels – Strategien und Konsequenzen. Schriften der Gesellschaft für Wirtschafts- und Sozialwissenschaften des Landbaues e.V. Münster-Hiltrup: nbn, (37), S.149-158.
- Raiser, G. (2012): Regional schlägt Öko. In: ACKERplus (04/12), S.11-12, http://www.mg-niedersachsen.de/fileadmin/user_upload/PDF-Dokumente/BeratenFoerdern/2012_Heidekartoffel_Detrmering.pdf .
- Tanguy, C.; Renault C.; Renault, S; Romieu, V.(2012): Value of production of agricultural products and foodstuffs, wines, aromatised wines and spirits protected by a geographical indication (GI) - Final report, http://ec.europa.eu/agriculture/external-studies/2012/value-gi/final-report_en.pdf
- Tress, F. (2012): Schwäbische Spätzle und Knöpfle als Herkunftsbezeichnung durch EU Kommission geschützt. PM, <http://www.tress.de/presseleser/items/schwaebische-spaetzle-und-knoepfle-als-herkunftsbezeichnung-durch-eu-kommission-geschuetzt.html>.
- Trofimtseva, O. (2012): Schutz von geografischen Angaben und Ursprungsbezeichnungen für Agrarerzeugnisse und Lebensmittel in Deutschland: ein offenes Feld., <http://www.idf-germany.com/idf-dienstleistungen-aufgaben/idf-normung-harmonisierung/news-detail/datum////schutz-von-geografischen-angaben-und-ursprungsbezeichnungen-fuer-agrarerzeugnisse-und-lebensmittel-i/> .
- Wirsig, A.; Profeta, A.; Lenz, R. (2010): Filderkraut, Schwäbische Maultaschen und Spätzle-Spezialitäten mit geschützter Herkunftsangabe in Markt und Marketing, landinfo 1/2010, S. 55-58, <https://www.landwirtschaft-bw.info/pb/site/lcl/get/documents/MLR.LEL/PB5Documents/lcl/pdf/s/Spezialit%C3%A4ten%20mit%20gesch%C3%BCtzter%20Herkunftsangabe,Alexander%20Wirsig,%20Terra%20fusca.pdf>.
- ZMP (2002): Wie viel Bio wollen die Deutschen? [How many Organic Products do the Germans Want to Consume?] Marktstudie, Nr. K221. ZMP - Zentrale Markt- und Preisberichtsstelle für Erzeugnisse der Land-, Forst- und Ernährungswirtschaft GmbH, Bonn.
- Zühlsdorf, A.; Nitzko, S.; Spiller, A. (2013): Kennzeichnung und Aufmachung von Lebensmitteln aus Sicht der Verbraucher: Empirische Untersuchungsbefunde. Agrifood

consulting gmbh, Göttingen, http://www.agrifood-consulting.de/fileadmin/agrifood/2013-05-12_LMK_Ergebnisbericht__final.pdf

Zühlsdorf, A.; Nitzko, S.; Spiller, A. (2013): Kennzeichnung und Aufmachung von Lebensmitteln aus Sicht der Verbraucher: Empirische Untersuchungsbefunde. Agrifood consulting gmbh, Göttingen.

4 Italy

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4.1 Organic-food market in Italy

4.1.1 Implementation

Concerning organic products, the 2000 “Finanziaria” established the Fund for the development of organic farming and quality. This is the fund which from 2004 on finances the National Action Plan for Organic Farming and Organic Products (PAN). In 2011, resources still available from the "National Programme of Action for organic farming and organic products for the years 2008-2009" were put out to tender, for a total of 853,995 EUR for actions 2.3 "Support to inter-profession" and 2.4 "Initiatives in support of producer organizations".

Several initiatives were undertaken with the resources allocated to the regions through the PAN, for a total amount of 4.7 million EUR destined to promotional activities to be achieved through the actions 3.1 "Promotion of organic products in catering biological" and 3.2 "Promotion of organic products to the citizen-consumer." Among the most relevant initiatives there is "Promotion in Organic Food P.RI.BIO", launched in July 2011 from the regions Campania, Basilicata, Calabria, Puglia, Sardinia and Sicily, with the aim of proposing new paths of territorial promotion together the themes of healthy eating and the culture of sustainability, and most recently "The streets of Bio: educational food and wine to discover the excellence biological Umbria", with which the Region aims to enhance the regional organic products with a direct spin on primary producers and raise awareness in the school.

4.1.2 Supply side

From a first analysis of the data provided to the Ministry of Agriculture, Food and Forestry by the SINAB - National Information System on Organic Agriculture (www.sinab.it) in 2012, it came out that the certified organic operators are 49,709 of which 40,146 exclusive producers; 5,597 preparer (including companies involved in the operation of retail sales); 3,669 involved both in the production activities and the preparation; 297 operators engaged in activities of import. Compared with the data referring to 2011, there was an overall 3% increase in the number of operators.

Looking at the distribution of operators in the country for the past years, Sicily has the highest number of organic farms followed by Calabria. While according to the number of processing companies Emilia Romagna is the leader region, followed by Lombardy and Veneto (Table 24).

The cultivated area under organic farming in 2012 (Table 25) amounted to 1,167,362 hectares, with an overall increase with respect to the previous year (+6.4%). The main productions are fodder, cereals and pastures. It follows, in order of importance the olive cultivation. For livestock production, distinguished on the basis of the main species farmed, data show, in comparison with last year, a significant increase, especially for pigs (+32.2) and bees (+29.2).

Table 24 Number of operators for organic products, 2012

	Exclusive Producers	Exclusive preparers	Producers/Preparers	Importers	Total operators (Dec.2012)	Total operators (Dec.2011)	Var. [%] 12/11
Total	40146	5597	3669	297	49709	48269	3
Sicily	7056	510	339	13	7918	7469	6
Calabria	6691	213	292	5	7201	7115	1,2
Apulia	5377	462	262	10	6111	5081	20,3
Emilia Romagna	2555	692	301	56	3604	3602	0,1
Tuscany	2344	442	722	22	3530	3536	-0,2
Lazio	2764	327	205	6	3302	3001	10
Sardinia	2048	66	81	4	2199	2272	-3,2
Marche	1668	192	141	6	2007	2127	-5,6
Piedmont	1282	354	225	38	1899	1977	-3,9
Campania	1454	303	134	5	1896	1896	0
Veneto	960	518	216	52	1746	1811	-3,6
Lombardy	873	605	173	46	1697	1506	12,7
Abruzzo	1246	191	110	4	1551	1612	-3,8
Trentino Alto-Adige	1091	288	144	9	1532	1459	5
Umbria	960	121	127	7	1215	1318	-7,8
Basilicata	1033	77	70	0	1180	1348	-12,5
Friuli Venezia-Giulia	269	100	43	4	416	432	-3,7
Liguria	219	94	57	9	379	389	-2,6
Molise	182	35	18	1	236	232	1,7
Aosta Valley	74	7	9	0	90	86	4,7

Source: SINAB, 2012.

Table 25 Cultivated areas for organic products, 2012, in hectares

Organic products	In conversion	Organic	Total
Total	291,821	821,921	1,113,742
Cereals	46,630	148,344	194,974
High Proteins, leguminous plants, grains	3,940	21,679	25,619
Roots	489	1,207	1,696
Industrial crops	1,957	12,907	14,864
Forage crops and other arable cultures	51,613	146,162	197,774
Vegetables	6,018	21,903	27,920
Fruits	5,945	16,251	22,196
Pulses	7,762	19,726	27,488
Citrus fruits	7,572	15,853	23,424
Vine	21,931	30,341	52,273
Olive	44,171	96,577	140,748
Other permanent crops	9,566	42,733	52,299
Meadows and range land (excl. meager range)	44,568	145,296	189,864
Meager range land	26,218	72,479	98,698
Residual farmland	13,441	30,463	43,904

Source: SINAB, 2012.

4.1.3 Demand side

Households' expenditure

Italy, with a modest per capita expenditure for organic products of 25 EUR, is not placed in the top positions in the world and in the European Union ranking. According to the data of the Household Panel Ismea/GFK-Eurisko (Table 26), the domestic consumption of packaged organic products in supermarkets grew in 2012 by 7.3% in value, after an increase of around 9% in 2011.

The dynamics of the last year was caused in particular by double-digit increases from biscuits, sweets and snacks (+22.9% in value) and non-alcoholic beverages (+16.5%), while to a lesser extent pasta, rice and bread substitutes (+8.9%) and fresh fruit and vegetables and processed (+7.8%). The eggs instead constitute the only area that marked a slight decrease (-1.9%).

Table 26 Household purchases in value of packaged organic products in 2011 and 2012*

Products	Var. [%] 11/10	Var. [%] 12/11	Shares [%] of total weight 2012
Total of packaged organic products	8.8	7.3	100.00
<i>whereof:</i>			
Fruits and vegetables (fresh and processed)	3.5	7.8	30.5
Dairy products	16.1	4.5	22.6
Eggs	21.4	-1.9	12.5
Biscuits, Sweets and snacks	14.4	22.9	9.4
Pasta, rice and bread substitutes	-3.2	8.9	8.3
Non-alcoholic beverages	10.5	16.5	6.5
Sugar, Coffee, Tea	-9.9	0.4	3.2
Meat and meat products	-14.5	4.8	2.0

* The data cover about 87-90% of the total value of packaged organic products purchased for domestic consumption.

Source: Ismea Family Panel/GFK-Eurisko

2011 data show that the consumption of organic products is concentrated on few categories: the first four (fresh and processed fruit and vegetables, dairy, eggs, pasta, rice and bread substitutes) cover more than three-quarters of the total consumption (Table 27). There was still a strong concentration of purchases on a limited number of products, as well as of a few categories: the first twenty products cover about 72% of the total household expenditure on packaged organic products and the top ten 57%. The organic food most consumed in terms of expenditure is still eggs (+21.4%). It follows yogurt, with a total of more than 9% and a growth in purchases in value by as much as 27.5%. Drinking milk is third in the ranking, biological (?) affects the total sales by 8.5%, with an increase in consumption of 9.5%.

Table 27 Household purchases of packaged organic products, 2011

	Shares [%] of total weight 2011	Var. [%] 2011/10
Fruits and vegetables (fresh and processed)	30.3	3.4
<i>Where of:</i>		
Jams and marmalades	8.2	8.6
Juices	2.7	-11.4
Lettuce	1.9	31.7
Dairy products	23.2	16.2
<i>Where of:</i>		
Yogurt	9.2	27.5
Milk	8.5	9.5
Butter	1.3	26.8
Eggs	13.6	21.4
Pasta, rice and bread substitutes	8.1	-3.2
<i>Where of:</i>		
Bread substitutes	5.2	0.3
Pasta	2.4	-11.4
Rice (integral)	0.3	-34.7
Biscuits, sweets and snacks	7.9	16.1
Sugar, coffee, tea	5.9	-3.4
Non-alcoholic beverages	3.8	16.0
Meat and sausages	2.1	-8.2
Oils	1.7	-18.6
Ready meals	0.5	-28.9
Other organic products	2.8	73.3
Total of packaged organic products	100.0	8.9

Source: Bioreport (2012)

Sales channels

An analysis of data relating to distribution channels in 2010 and 2011 (Table 28) showed that all types of outlets have seen increases in 2010, while in 2011 sales decreased in traditional stores (-46.9%). It is assumed that this decline is linked to the proliferation of hypermarkets and Hard Discounts that are much more competitive in terms of prices and attractive to new consumers. In fact, in 2011 the most significant purchases increases were recorded in Free Services, in Hard Discount and Supermarkets, respectively with increases of 22%, 16% and 14.6%. This phenomenon can be also related to the link between supermarket chains and private label of organic products.

Table 28 *Distribution Channels of organic products, 2010-2011*

Channels	Var. [%] 2010/09	Var. [%] 2011/10
Italy, total	11,6	11,5
Hypermarkets	18.2	11.8
Supermarkets	3.7	14.6
Traditional Shops	29.3	-46.9
Free Services	26.8	21.9
Hard Discount	14.9	16.1
Other Channels	4.2	8.6

Source: Ismea/GFK-Eurisko.

Overall, the consumption crisis still seems not to affect organic products. Evidence of this is the last survey on households' consumption conducted by Ismea/GFK-Eurisko that indicates that in the first quarter of 2013 expenses for bio are still growing (+8.8%) compared to the same period last year. The data related to purchases of packaged organic products in the great organized distribution reveal that the trends are particularly favorable for cookies, sweets and snacks, and fresh and processed fruit. The results about the first quarter of 2013 also confirm a number of dynamics that are consolidating over time. First of all is the large concentration of purchases of few categories, with the first three (fresh and processed fruit and vegetables, dairy and eggs) that cover nearly two-thirds of total expenditure. Secondly, there is a considerable greater propensity to consume organic products in the northern regions, which represent alone more than 73% of the total bio.

Alongside these important channels of specialty shops, many alternative forms of sale are rapidly growing, which still have low market shares, but attract a growing interest from the consumer. It refers to direct sales, to 'joint purchasing groups' (GAS) and to organic markets. For these types of sales data from Biobank monitors the number of outlets, noting a steady increase, with growth rates per year higher for GAS and direct sales than that of markets, which in 2011 also marked a slight decline in their number.

4.2 PDO, PGI and TSG products in Italy

4.2.1 Implementation

The initiatives taken by the Italian government in the organic and PDO products area, during the last years, have focused on the quality and the need to promote the activities of the Italian farmers.

With respect to 2012 (ISMEA, 2012), the most relevant changes are:

- The Ministerial Decree on national quality schemes (SQN);
- Article 62 of the decree on liberalization;
- The ministerial decree with which the PDO and PGI wines were approved, standardizing with the European system.

National Quality Schemes

The national quality schemes arise from the need to cope with the Europeans standards, in particular with Regulation EC 1974/2006 and EC 1698/2005, which provide that the Member States may not give subsidies to farms unless they implement recognized quality systems. The recognized quality systems are:

- Organic Production
- Products with special denomination (PDO and PGI);
- DOC and DOCG wines;
- Traditional specialties guaranteed (TSG).

Beyond these, States may establish systems of national quality standards which must be respected by the producers so that they can have access to financial support. Such systems must be able to ensure that the specificity of the final product under such schemes derives from detailed obligations on farming methods that guarantee higher quality of products with respect to the current commercial rules in terms of public health, plant health, animal welfare, and environmental protection.

The schemes involve binding production rules, which must be verified by an independent inspection body. The ultimate goal is to identify the finished product through a ministerial brand. This meant that each Member State acted within its own legislation to create a national quality scheme.

Regarding Italy, in February 2011 it approved the decree on the National Quality System Integrated production (SQNPI), while in 2012 the government issued a ministerial decree related to the livestock sector and others are under consideration. There are even numerous regions that have developed their own systems of quality.

4.2.2 Supply of PDO, PGI and TSG products

In 2013, 250 products with PDO, PGI and TSG denomination were registered, of which 156 were PDO, 92 were PGI and 2 were TSG. The fruits and vegetables was the biggest categorie of GI products (Table 29).

Table 29 Italian PDO, PGI and TSG products in 2013, % per sector

Sectors	Number	in % on total
Fruits & Vegetables	100	40.0
Cheeses	44	17.6
Olive Oils	43	17.2
Meat	37	14.8
Other	26	10.4
Total	250	100.0

Source: authors' presentation

In the next tables (Table 30, 31) are presented the production, and consumption of PDO products, in the last years.

Table 30 Trend of production turnover for each PDO sector in Italy during the period 2009-2011 (millions of EUR)

Sector	2009	2010	2011	Var. % 11/10
Cheeses	2,999	3,408	3,753	10.1
Meat Products	1,868	1,863	1,974	6.0
Fruits & Vegetables	228	345	376	9.1
Balsamic Vinegars	46	247	266	7.6
Olive Oils	69	70	83	18.6
Fresh Meat	39	42	55	30.7
Other	2	2	3	69.2
Total	5,251	5,976	6,510	8.9

Source: Ismea e Consorzi di tutela (Consortium of protection).

Table 31 Trend of consumption turnover for each PDO sector in Italy during the period 2009-2011 (millions of EUR)

Sector	2009	2010	2011	Var. % 11/10
Cheeses	3,398	4,111	4,424	7.6
Meat Products	3,228	3,311	3,340	0.9
Fruits & Vegetables	329	484	470	-2.9
Fresh Meat	125	129	160	24.5
Olive oils	61	65	69	6.6
Balsamic Vinegars	17	85	39	-53.8
Other	2	2	3	104.0
Total	7,160	8,186	8,506	3.9

Source: Ismea e Consorzi di tutela (Consortium of protection).

The tables show an increasing trend, both for production and consumption. The highest growth by production as well as by consumption is observed by fresh meat and categorie "other products".

As regards the number of operators, the total operators in the year 2012, in comparison with 2011, indicate in most sectors an increase, except: processed meat, cheese, olive oil, patisserie products. Both, in case of producers and producers under transformation, the trends were almost the same (Ismea, 2012).

Cheese and meat are the two main categories of Italian PDO products in terms of production and trade, if we consider that in 2011 they recorded respectively 57.6% and 30.3% of total the production turnover and 52 and 39.3% of sales for consumption in the domestic market²⁴.

In 2011, the certified production of cheeses with a protected designation of origin amounted to 439,775 tons, down by about two percentage points, mainly due to the sharp drop from Pecorino Romano DOP and to a lesser extent by Provolone and Grana Padano DOP. The segment of PDO and PGI cheeses accounted in 2011 for revenue of 3.75 billion USD to production (of which 1.13 realized on foreign markets) and of 4.42 for consumption on the domestic market. The production appears highly concentrated: the first two products, Grana Padano DOP and Parmigiano Reggiano DOP, represent more than 73% of the total value of production, the first five around 90% and the top ten over 96%. The sector of PDO cheeses recorded in 2011 an increase in production of 10.1%, compared with a smaller increase (+7.4%) in consumption on the domestic market.

The PDO-PGI meat products are the second largest sector in terms of turnover in production and consumption. In 2011, the certified production of meat products, amounting to 192,970 tons remained stable with respect to the previous year: the increases in the Prosciutto di San Daniele (PDO), Bresaola from Valtellina (PGI), Speck Alto Adige (PGI) and Prosciutto Toscano (PDO) were offset by declines in Prosciutto di Parma (PDO) and Mortadella Bologna (PGI). It should be noted that, among the productions of recent recognition, 2011 was the first year in which Coppa di Parma PGI (292 tons), Porchetta di Ariccia PGI (191 tons) and Prosciutto Amatriciano PGI (123 tons) were recognized. The PDO and PGI meat products sector has created in 2011 a market value of 1.97 billion for the production and 3.34 billion for consumption only on the domestic market. This segment is highly concentrated: the top five products for production turnover (that are Prosciutto di Parma and Prosciutto di San Daniele PDO, Mortadella Bologna PGI, Bresaola della Valtellina PGI and Speck Alto Adige PGI, ranking unchanged compared to last year) account for 92% of the total value. PDO and PGI meat products recorded in 2011 an increase of 6% for production and a lower one (approximately +1%) for consumption in the domestic market.

4.2.3 Demand side

On the expenditure side, according to an Ismea/Gfk-Eurisko survey, the annual increase was 2.7% for the entire category of cheese and 4.2% for PDO cheeses²⁵. About 35% of the total expenditure for cheeses is represented by PDO products, especially Parmigiano Reggiano and Grana Padano (collectively, the expenditure on these two hard cheeses represents, in 2011, about two-thirds of total expenditure for PDO cheeses).

²⁴ CIAL, 2012

²⁵ Ismea and Qualivita Report, 2012

As for the households' consumption of PDO cheeses, on average, in 2011, every family spent about 360 EUR for the purchase of 40 kg of cheese, in 93 purchase acts, one every 4 days, with a purchase of just less than half a pound of product to act. Over 70% of purchases in volume of cheeses DO was performed in 2011 in the Modern Distribution (hypermarkets, supermarkets and discount stores), while for traditional retail (street vendors included), the share was just over 22%.

As for the households' consumption of PDO meat, in 2011 a little less than the 40% of expenditure on meat products is represented by PDO products²⁶. Within this category, the purchases are focused on ham (first of all the Prosciutto di Parma PDO), salami and bresaola, followed by speck, bacon and mortadella.

Almost every household buys PDO meat products; on average, in 2011, every family spent 230 EUR for the purchase of 17 kg of meat products, made 68 acts of purchase, once every 5 days, with the purchase of 250 grams of product per act. Also the PDO meat products are purchased by almost all the Italian families, but the average purchase and the frequency of purchase are significantly lower compared to the entire category meat derivatives in 2011: every family spent an average of 91 EUR for the purchase of 5.6 kg of PDO, making a little less than two acts per month, purchasing 240 grams of product per act.

4.2.4 Trade

Next tables (Table 33, 34) show us the evolution of the Italian exports of PDO and PGI products, in the last years.

Table 32 Total export quantities of Italian PDO and PGI products for the period 2009-2011 (in tonnes and thousands of liters)

Sector	2009	2010	2011	Var. % 11/10
Fruits & Vegetables	101,534	180,414	190,401	5.5
Cheese	114,689	125,482	122,197	-2.6
Balsamic Vinegar	9,987	54,936	67,576	23.0
Meat products	31,316	36,104	38,127	5.6
Olive oils	5,406	4,956	5,701	15.0
Other	16	23	49	108.8

Source: Ismea Report, 2012.

If we take a look at the export of PDO and PGI products in quantitative terms, it grew in the majority of cases during the analysed period, with only one exception, cheese. Globally, the trend had a plus of almost nine percent. The biggest jump in the period 2009-2011 was done by "balsamic vinegar", followed by "olive oils". It seems that the groups of "fruit & vegetables" and "meat products" reached their limit, because their growth was relatively small.

The quantitative analysis shows that the Italian export concentrates on fruit & vegetables and cheese.

²⁶ Nomisma, Fondazione Qualivita

Table 33 The export value of Italian PDO and PGI products in the period 2009-2011 (millions of EUR)

Sector	2009	2010	2011	Var. % 11/10
Cheese	941	1,134	1,139	0.4
Meat Products	353	402	445	10.7
Balsamic Vinegars	38	198	243	23.1
Fruit & Vegetables	58	123	149	21.7
Olive Oils	40	39	49	25.9
Other products	0.10	0.11	0.14	23.7
Total PDO and PGI	1,430	1,896	2,026	6.9

Source: Ismea Report, 2012.

In terms of values, the export shows an increasing trend, as well. Without exceptions, the products we analysed had the same tendency, with a rapid growth especially for “olive oils”, “balsamic vinegars” and “fruit & vegetables”. Among products we analysed, only “cheese” had a slow growth, but, it still remains the most important Italian product for export.

Summing up, we can conclude that, for some groups of products export stagnated (or increased slowly) like “cheese”, “fruit & vegetables”, “meat products” and other groups had a good dynamic, and rapid growth for “balsamic vinegar” and “olive oils”. But, only two Italian groups of products are still predominant on international market and that are “cheese” and “fruit & vegetables”.

4.3 Conclusions

Once the EU organic regulation was implemented, numerous small associations of organic farmers, or producer and consumer committees operating in each region reorganised themselves. As a consequence, the Italian organic agriculture increased rapidly.

For a long time, Italy was the country in Europe with the largest area of organic agricultural land. Nowadays, it is still the most important producer after Spain. Besides other EU countries, Italy seems to have reached a plateau of its growth in organic agriculture, since 2008 it is on the second place in EU in terms of area with organic agriculture, when the economic crisis started. Still, Italy has the largest number of certified organic producers in the EU.

Having in view the growing of the domestic market, organic imports are increasing in importance. Organic food consumption has been affected strongly in a few EU countries but not in Italy, where, after a decline during the crisis, it increased again. The largest concentration of consumers buying organic products is in the northern regions of Italy, where the industrial and economic structure is stronger.

Most of the organic food sold in Italy is purchased in supermarkets, followed by specialized shops, and at local farms.

Italy presents a success story in organic fruit and vegetable production, taking advantage of favorable climate and agronomic conditions and close geographic access to major export markets. More than 50 percent of fruit producers are located in Sicily.

4.4 References

- Biofach (2013) (joint with SINAB): Il mercato internazionale e nazionale dei prodotti biologici e le opportunità per le imprese italiane sul mercato Tedesco.
- BIOReport (2012): Organic farming in Italy, National Rural Network 2007-2013
- Ismea (2012): 10° rapporto 2012 Qualivita sulle produzioni italiane DOP IGP STG.
- Istat (2013): Report: I prodotti agroalimentari di qualità DOP, IGP e STG.
- Parodi, G. (2013): alla ricerca della sostenibilità: lo sviluppo dell'agricoltura dall'unità d'Italia alla Green Economy. PhD Thesis, Università di Bologna.
- Rete Rurale nazionale (2012): Bioreport 2012: L'agricoltura Biologica in Italia.
- SINAB (2012): Bio in cifre 2012: i dati del biologico italiano. Prime anticipazioni del SINAB.

Annex

Table 34 List of Italian PDO Cheeses with relative data on production

		Annual Production of PDO Cheeses (tons)						
		2007	2008	2009	2010	2011	2012	± on 2011
Grana Padano	C	158.017	163.341	158.326	163.326	176.5	178.906	+1,36%
Parmigiano Reggiano	C	117.044	116.064	113.436	119.221	133.768	136.919	+2,36%
Gorgonzola	C	48.86	48.721	47.644	48.624	50.335	49.8	-1,06%
Asiago	C	22.649	23.318	23.528	22.669	22.561	23.362	+3,55%
Taleggio	C	8.814	8.8	8.497	8.699	8.542	8.327	-2,52%
Montasio	C	7.144	7.349	7.691	6.871	7.088	6.898	-2,68%
Provolone Valpadana	C	9.637	9.615	8.799	7.742	7.017	6.857	-2,28%
Quartirolo Lombardo	C	3.747	3.693	3.704	3.805	3.732	3.735	+0,08%
Fontina	C	3.556	3.747	3.527	3.588	3.51	3.442	-1,94%
Piave⁴	C	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	1.183	1.87	2.39	+27,81%
Valtellina Casera	C	1.28	1.36	1.4	1.46	1.245	1.3	+4,42%
Stelvio	C	<i>n.p.</i>	1.112	1.186	1.152	1.026	1.031	+0,49%
Toma Piemontese	C	1.216	1.077	1.048	1.065	978	928	-5,06%
Raschera	C	890	780	745	836	801	715	-10,78%
Caciocavallo Silano	C	1.008	750	750	738	735	524	-28,71%
Bra	C	740	762	937	783	726	621	-14,40%
Monte Veronese	C	496	589	655	755	688	753	+9,45%
Casatella Trevigiana	C	<i>n.p.</i>	<i>n.p.</i>	467	242	259	493	+90,25%
Castelmagno	C	198	197	216	227	223	228	+2,05%
Ragusano	C	137	131	165	160	130	157	+21,02%
Formai de Mut	C	67,1	71,0	72,0	74,5	70,0	61,0	-12,81%
Spressa delle Giudicarie	C	98,4	150	58,0	60,0	50,0	49,0	-2,00%
Valle d'Aosta Fromadzo	C	5,1	4,2	4,6	6,0	6,3	5,5	-13,27%
Provolone del Monaco	C	<i>n.p.</i>	<i>n.p.</i>	40,0	40,0	<i>n.p.</i>	<i>n.p.</i>	-
Salva Cremasco	C	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	240	-
Casciotta d'Urbino	M	245	229	220	235	235	218	-7,23%
Bitto	M	275	290	264	237	213	253	+18,78%
Robiola di Roccaverano	M	89,0	84,2	88,3	109	104	98,6	-5,18%
Murazzano	M	22,9	21,0	15,8	16,0	13,0	13,2	+1,51%
Totale		386.236	392.254	383.483	393.924	422.425	428.324	+0,85%*
		2007	2008	2009	2010	2011	2012	± su 2011
Mozzarella di bufala campana	B	35.64	31.96	33.9	36.966	37.446	37.056	-1,04%
Totale		35.64	31.96	33.9	36.966	37.446	37.056	-1,04%*
		2007	2008	2009	2010	2011	2012	± su 2011
Pecorino Romano	E	33.425	29.461	26.746	27.477	24.702	25.453	+3,04%
Pecorino Toscano	E	1.943	2.816	2.933	3.092	3.044	3.068	+0,79%
Pecorino Sardo	E	1.8	1.96	1.86	1.935	1.989	2.031	+2,11%
Fiore Sardo	E	600	650	(e) 712	800	752	(e) 735	-2,26%
Canestrato Pugliese	E	104	106	83,7	28,0	25,3	(e) 25,0	-1,29%
Pecorino Siciliano	E	15,6	35,0	21,0	24,6	11,8	26,3	+122,13%
Pecorino di Filiano	E	<i>n.p.</i>	8,0	8,0	3,5	6,5	8,5	+30,77%
Totale		37.888	35.036	32.364	33.36	30.531	31.347	+1,38%*

Source: CIAL, 2012.

5 The Netherlands

Liesbeth Dries

5.1 Organic-food market in the Netherlands

5.1.1 Implementation

Policy concerning the organic sector

The 2001-2004 policy document of the Ministry of Agriculture²⁷ concerning the development of the organic market in The Netherlands put forward a target of 10% of the agricultural area under biological production by 2010 and 5% of the food expenditures. These were ambitious goals. In 2007 the market share of organic products in total food expenditures was only 2%. On the one hand, the price difference between conventional and organic products is still considerable and this poses a barrier for a large share of consumers. On the other hand, also the number of producers that switch from conventional to organic is stagnating. This is attributed to a lack of confidence in the market. Furthermore, a study of the LEI²⁸ showed that the goal of 10% organic agricultural area would not just create market but also labour problems as it would require an additional input of 5,000 to 10,000 additional agricultural employees.²⁹

In 2008, the targets of the 2001-2004 policy document were loosened in an agreement between the Ministry of Agriculture and market stakeholders on the development of the organic market in The Netherlands. This agreement specified that the organic sector should develop into an independent and strong sector over the coming 4 years with a market share that grows by 10% annually. The organic agricultural area would have to grow by 5% each year. At the final congress of the Task Force Market Development Organic Agriculture in 2011, the Minister of Agriculture declared that the organic sector had sufficiently developed to transform the specific policy for the sector into general policy.

However, also the new growth targets proved too ambitious. In 2010 the organic agricultural area increased by only 3.9% and in 2011 by 2.3% to 55,182 ha. In 2012 the total certified organic agricultural area decreased to 53,782 ha. The reason for this decline is the abolishment of the subsidies to cover certification costs for organic farmers.

Organisations involved in policy for organic production and its implementation

The policy for organic production is based on EU regulations, Dutch regulations (The Law on Agricultural Quality; the Decree and the Regulation on Agricultural Quality - 2007) and rules of the monitoring and control organisation SKAL. The basis of the policy is that organic production and product labels have to fulfil certain requirements and that an independent

²⁷ The Dutch agricultural policy has been the responsibility of different ministries over the years. Until 2010 this task was performed by the Ministry of Agriculture, Nature and Food Quality. Since then agricultural policy is under the Ministry of Economic Affairs, Agriculture and Innovation (named Ministry of Economic Affairs since 2012). For simplicity, we refer to the competent ministry as the Ministry of Agriculture throughout this text.

²⁸ LEI is a leading socio-economic research institute in the Netherlands and part of Wageningen University and Research Centre.

²⁹ This estimate does not include the effects of the introduction of labour-saving technologies in the sector.

control organisation (SKAL) monitors compliance with these requirements. SKAL is appointed by the government to fulfil these duties. Organic producers pay SKAL for inspection and certification services by SKAL.

Other relevant organisations in the Dutch organic sector:

- Biologica was the policy and promotion organisation for organic agriculture and food. Organic farmers, traders, processors and retailers worked together in Biologica to increase the awareness about and the market for organic products. In 2011, the organisation was integrated in the chain organisation Bionext.
- Bionext was set-up in 2011 as the new chain organisation for organic agriculture and food. Bionext comprises the expertise of Biologica and the Task Force Market Development Organic Agriculture. The different chain segments are represented in the organisation as organic farmers, traders, processors and retailers.
- LTO-Vakgroep Biologische Land-en Tuinbouw groups organic farmers that are a member of LTO-Nederland (Dutch agricultural producers' organisation) or of the Federation for Organic Farmers (FBB) of Biologica. FBB is a cooperation between the Dutch Association for Ecological Agriculture (NVEL) and the Association of Organic-Dynamic Farmers (VDBD).
- Louis Bolk Instituut is a private research institute specialised on organic farming, food and health service. The agricultural research stream employs around 30 researchers.
- Task Force Market Development for Organic Agriculture (MBL) was a cooperation between the government and a diverse group of stakeholders from the sector (among which LTO Nederland, the banking sector, Biologica). The Task Force was ended in 2011 and its expertise transferred to the chain organisation Bionext.
- KLV Studiekring Biologische Landbouw (KLV SBL). KLV is the association of academics that are active in agriculture. The KLV SBL is meant for anyone active in organic agriculture with an affinity for research, extension or education in this area.
- Biokennis gathers knowledge about organic agricultural and chain research of Wageningen University and Louis Bolk Institute (see also <http://www.biokennis.nl>)
- The Association for Organic-Dynamic Agriculture and Food wants to improve awareness about Organic-dynamic agriculture and improve knowledge of the sector. The association also holds the Demeter quality label for the Benelux.
- Stichting Zaadgoed was established in 1998 to stimulate organic plant selection.
- Stichting Biologische Boomkwekerijgewassen has the objective to promote organic tree selection, to solve barriers in the sector and to strengthen the position of the organic tree selection sector by sharing information and experience and by attracting subsidies.

Bio-labels in the Netherlands

Bio+ Represents brand of butcher De Groene Weg for organic meat products. The aim is to upgrade the Bio+ brand to all fresh food categories.

EKO Represents organic products that comply with the Dutch regulations and that are certified by SKAL. The brand is private property of SKAL.

Demeter Quality-brand for products of the organic-dynamic agricultural and food processing sector. The brand is private property of the Association for Organic-Dynamic Agriculture and Food.

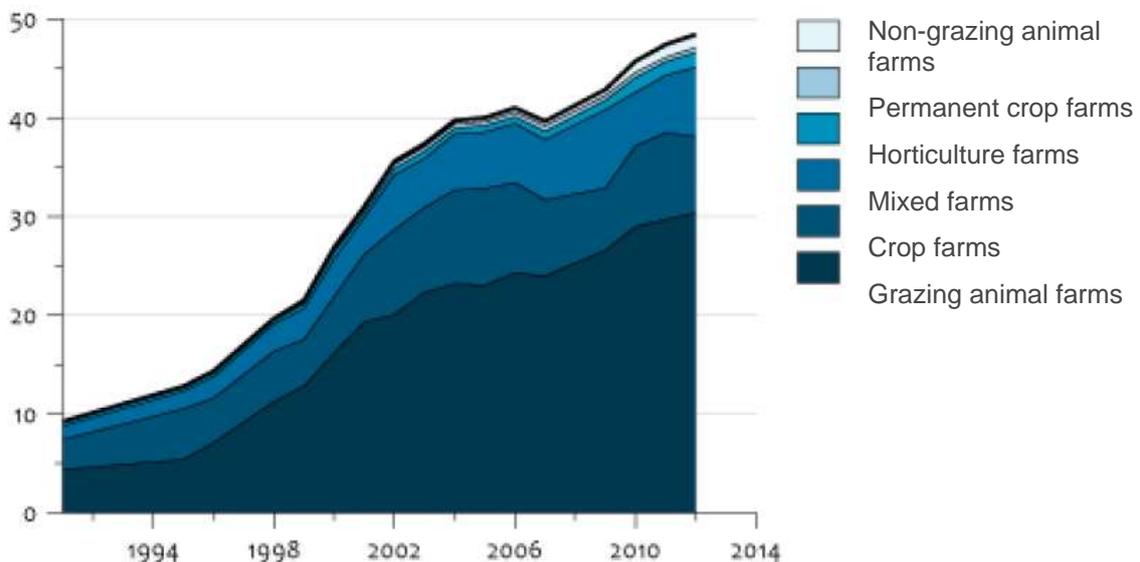
Biologische landbouw - EG-controlesysteem (Biological agriculture – EC-control system)

Logo approved by the European Commission in 2000 that can be applied voluntarily by producers if controls have shown that their systems and products comply with the EU regulations.

5.1.2 Supply side

Figures 3 and 4 give an overview of the organic production sector in the Netherlands. The total area under organic agriculture is 48.4 thousand hectares in 2012, or 2.6 per cent of the total agricultural area. The strong growth in the area used for organic agriculture that was observed since the 1990s, stagnates from 2004 onwards. 2010 and 2011 witnessed another growth spark but this trend did not continue in 2012.

Figure 3 Area of organic agriculture in the Netherlands in 1,000 hectares (1991-2012)

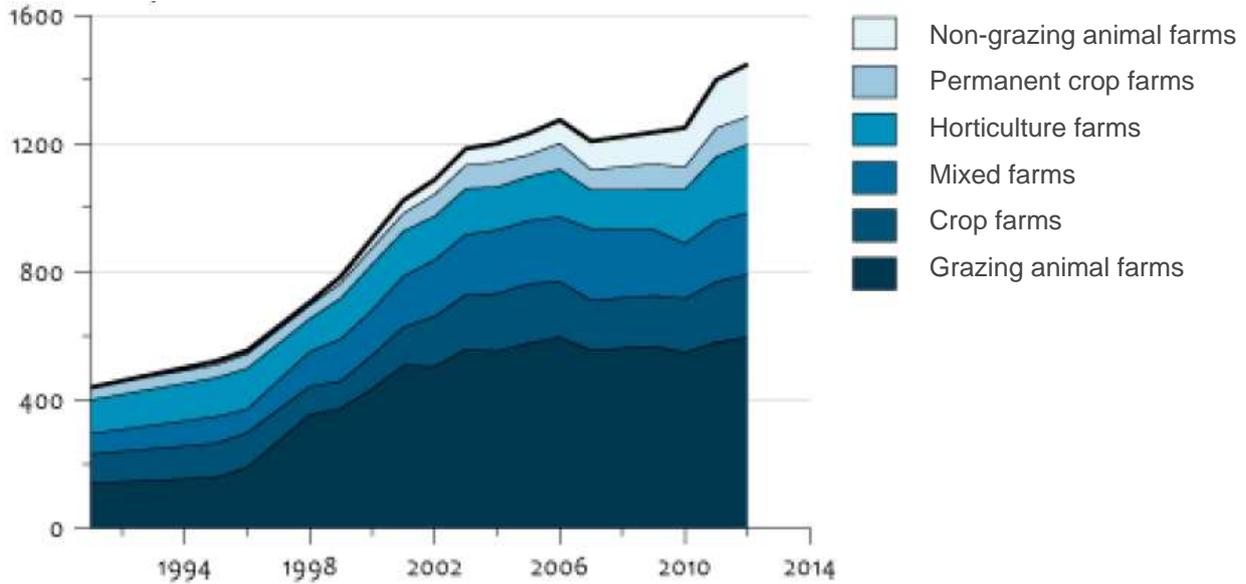


Source: Compendium voor de Leefomgeving (Environmental Data Compendium).

There were 1,448 organic farms in the Netherlands in 2012. About 41% of these farms had grazing animals: cattle, sheep and goats. Around 14% of organic farms were mixed, another 14% were crop farms and 14% were horticultural farms, while 11% of farms reared non-grazing animals and 6% of farms grew permanent crops. In comparison, of the farms in the conventional agricultural sector 54% had grazing animals, 18% were crop farms, 14% were horticultural farms, 8% had non-grazing animals, 5% were mixed farms and 2% grew

permanent crops. In other words, the organic sector consists of relatively more mixed farms, permanent crop farms and farms that rear non-grazing animals than the conventional sector.

Figure 4 Number of organic farms in the Netherlands (1991-2012)



Source: Compendium voor de Leefomgeving (Environmental Data Compendium).

Tables 35 and 36 give further information about the size of the organic sector in The Netherlands and its evolution. The number of certified farms increased in the period 2006-2011 at a steady rate of around 2% per year. The number of certified processors increased more rapidly at a rate of more than 12% per year in the period 2008-2011. The total certified organic area and the share of organic area in total agricultural area increased slightly between 2009 and 2011. The latter was the result of the increase in organic area but also a decrease in total agricultural area.

Table 35 Number of certified organic farms and processors in the Netherlands

	2006	2007	2008	2009	2010	2011
Number of organic farms	1,362	1,372	1,395	1,413	1,462	1,511
Number of organic processors	-	-	1,247	1,343	1,529	1,713

Source: Monitor Duurzaam Voedsel (2010, 2011).

Table 36 Certified organic area in the Netherlands, in ha

Products	2009	2010	2011
Potatoes, fruits and vegetables	6,290	6,809	6,790
Grains	5,460	5,539	5,160
Grassland	36,284	34,153	35,168
Feed grains	1,750	1,718	1,798
Fallow	521	455	437
Other	1,606	5,274	5,829
Total organic area in NL	51,911	53,948	55,182
Total agricultural area in NL	1,917,483	1,872,319	1,858,390
% organic area in total	2.71	2.88	2.97

Source: Monitor Duurzaam Voedsel (2009, 2010, 2011).

5.1.3 Demand side

This section gives an overview of the consumer market for organic products in the Netherlands. Table 37 shows that the organic market represents about 2.3% of total consumer expenditures in the Netherlands in 2012. This share has increased steadily over the years.

Table 38 shows that dairy products is the main organic food category (over 23%), followed by fruits and vegetables (including potatoes) and meat products. Fruits and vegetables, but also bakery products have witnessed a decline in importance over the years in favour of dairy products and eggs. Organic fish is also a category that is rapidly growing, although its overall shares in organic food expenditures is still low (0.7%).

Table 37 Total consumer expenditures on organic and conventional food (mil EUR)

	2009	2010	2011	2012*
Total expenditures organic food	665.1	752.1	880.9	934.3
Total food expenditures	43,695.6	43,689.2	44,928.6	40,621.7
Market share organic food (%)	1.5	1.7	2.0	2.3

*Data for 2012 are estimates.

Source: Monitor Duurzaam Voedsel (2010, 2011, 2012).

Table 38 Consumer expenditures on **organic** food products (% per product group)

Products	2009	2010	2011	2012	Change 2012/2009
Potatoes, fruits and vegetables	22.3	21.9	20.2	19.0	-14.8
Dairy products	18.9	21.4	22.9	23.3	23.2
Meat, meat products and meat-replacements	15.2	14.8	14.4	15.0	-1.3
Bread and other bakery products	10.2	9.7	9.2	9.5	-7.0
Eggs	3.1	3.2	3.6	3.3	6.5
Coffee and tea	4.1	3.3	3.5	4.0	-2.6
Fish	0.1	0.3	0.4	0.7	700.0
Preservables, and other food	26.1	25.4	25.8	25.2	-3.5

Source: Monitor Duurzaam Voedsel (2010, 2011, 2012).

Comparing tables 38 and 39 shows that organic consumption mainly takes place in the fresh categories (fruits and vegetables, dairy and eggs) as the share of these sectors in the organic food market is almost double their share in the overall food market.

Table 39 Consumer expenditures on food products (% per product group)

Products	2009	2010	2011
Potatoes, fruits and vegetables	12.4	12.0	11.8
Dairy products	12.5	11.8	11.9
Meat, meat products and meat-replacements	13.6	13.3	13.1
Bread and other bakery products	7.0	7.1	7.1
Eggs	0.7	0.8	0.7
Coffee and tea	5.0	5.6	5.8
Fish	1.9	2.1	2.1
Preservables, and other food	46.9	47.3	47.5

Source: Monitor Duurzaam Voedsel (2010, 2011, 2012).

Table 40 and 41 provide an overview of the market channels where consumers buy their organic foods for 2010 (table 40) and 2012 (table 41). We observe that the supermarket is the main channel through which organic products are being sold and this especially for the main organic product categories: fruits and vegetables, dairy and meat. Organic fish is almost exclusively available in supermarkets. Organic bakery products and coffee and tea are distributed rather equally through different market channels as the specialty shops and the Food Service sector (HoReCa) also have a relatively large market share.

Table 40 Consumer expenditures on organic food per product group and market channel in 2010 (%)

Products	Supermarket	Specialty shop	HoReCa*	Other
Potatoes, fruits and vegetables	58.5	25.1	3.1	11.1
Dairy products	52.1	14.7	31.0	2.2
Meat, meat products and meat-replacements	62.3	29.7	6.2	1.8
Bread and other bakery products	30.2	45.2	20.4	4.2
Eggs	71.5	19.3	6.9	2.3
Coffee and tea	30.8	42.7	26.5	0.0
Fish	-	-	-	-
Preservables, and other food	32.9	51.0	8.1	8.0

* Hotels, Restaurants and Catering

Source: Monitor Duurzaam Voedsel (2012).

Table 41 Consumer expenditures on organic food per product group and market channel in 2012 (%)

Products	Market share	Supermarket	Specialty shop	HoReCa*
Potatoes, fruits and vegetables	3.9	69.8	26.9	3.3
Dairy products	4.8	57.1	14.3	28.6
Meat, meat products and meat-replacements	2.7	61.8	27.1	11.1
Bread and other bakery products	3.2	34.8	44.3	20.9
Eggs	9.6	74.6	21.1	4.3
Coffee and tea	1.6	39.2	36.2	24.6
Fish	0.8	99.0	0.9	0.1
Preservables, and other food	1.2	35.6	51.6	12.8

* Hotels, Restaurants and Catering

Source: Monitor Duurzaam Voedsel (2012).

At the moment, the supermarket is the main market channel through which consumers buy organic products (45%), followed by the organic specialty store (35%). There is a large gap between 3% organic assortment in supermarkets and 100% in the specialty stores. Furthermore, specialty stores and supermarkets differ in the type of organic products that consumers buy there. In supermarkets the organic consumer basket is mainly filled with fresh products, while in the specialty stores consumers mainly buy preservables, bread, tea and coffee. In Germany and the UK, also in-between retail formats with an organic assortment between 40 and 80% exist (Tegut and Whole Foods respectively). In The Netherlands, these formats (Marqt and Landmarkt are two examples) are not yet well-developed (Bionext, 2011).

Research conducted at the University of Twente shows that the main group of consumers that buy organic products consists of women between the ages of 35 and 44, with children older than 6 years old. These women typically also come from the higher socio-economic classes. Consumers of organic products are generally concerned about their health and they believe that food and food habits can contribute to a healthy life. The choice for organic food products is in line with this view. This is also shown in table 42.

Table 42 Motives for buying organic products

Motives	% of respondents
Healthier	69%
Better for the environment	66%
More animal-friendly	63%
Tastier	33%
More reliable	25%
For my children	16%

Source: Eko-monitor (2006).

A growing market segment for organic products is the HoReCa business. Caterers and restaurant holders claim that they mainly follow the trend of increased demand from their customers for organic products. They also mention ‘better taste’, ‘free of pesticides’, and ‘more environmentally friendly’ as important reasons. Most caterers and restaurants that sell organic products are small-scale and have a strong focus on regionally produced products (Hoogerduijn and Pool, 2008).

5.1.4 Trade

Dutch companies have gained a strong position in the export and/or import of organic products over the years. In this respect, the Netherlands fulfils a central role in the demand and supply for organic products within the EU, especially with respect to the import of organic products from developing countries. On top of this, the Netherlands has a number of strong primary organic sectors that are also actively exporting, such as crops, greenhouse and other vegetable production, dairy, goats, pork and poultry.

Table 43 *Export of organic products in 2012 (in EUR)*

	Export	Re-export	Production NL
Potatoes, Fruits and Vegetables			
Potatoes	2,800,000	-	2,800,000
Greenhouse vegetables	76,500,000	30,600,000	45,900,000
Other vegetables	48,800,000	2,440,000	46,360,000
Fruits	222,200,000	210,000,000	12,200,000
Other (e.g. seed material)	15,000,000	7,000,000	8,000,000
Total	365,300,000	250,040,000	115,260,000
Intermediary, branded and private label products			
Intermediary products	195,500,000	175,950,000	19,550,000
Branded and private label products	73,810,000	-	73,810,000
Total	269,310,000	175,950,000	93,360,000
Animal products			
Mixed fodder	35,156,000	35,156,000	-
Eggs	62,170,000	-	62,170,000
Dairy	36,488,124	-	36,488,124
Meat	15,550,000	-	15,550,000
Total	149,364,124	35,156,000	114,208,124
TOTAL	783,974,124	461,146,000	322,828,124

Source: Bionext (2012), these numbers are estimates based on expert interviews in the organic sector because statistical information on the organic export market is not available.

Table 43 gives an overview of total exports of organic products from the Netherlands. In 2012, the total export value of organic products was 783 million EUR. This includes both consumer and intermediary export products and it also covers re-export of organic products that were imported into the Netherlands but not consumed there. Fruits and vegetables (including potatoes) make up a large share of the total export value, more than 365 million EUR. Fresh fruit exports dominate this category with over 222 million EUR export value. However, 210 million EUR worth of fruits are not grown in the Netherlands but imported and then re-exported. This shows the strong position of the Dutch trading companies that are catering to the growing demand for organic produce in other EU countries. The majority of vegetable exports consist of vegetables that are grown in the Netherlands. The high vegetable export value reflects the position of the Netherlands as a market leader in the industrial sectors for deep-frozen and canned vegetables.

In terms of the export of organic animal products, the Netherlands hold a strong position in the poultry sector (62 million EUR). This includes mainly the export of eggs but also breeding animals are included. Mixed fodders are also an important export category but the total volume of mixed fodder exports originates from outside the Netherlands, again pointing to the strong

mediator function of the Dutch trading companies. The export of dairy products includes mainly cheese. For organic milk, the Netherlands has actually become an importing country due to the strong increase in domestic demand in recent years. The export of meat products mainly consists of pork exports. The Dutch organic pork industry is market leader in the EU.

The main export markets for the Dutch organic sector are the neighbouring countries: mainly Germany, then Belgium, France, the United Kingdom and the Scandinavian countries. Outside of the EU organic exports also reach the United States and Asian countries such as South-Korea, Japan and China. The focus on neighbouring countries makes sense especially in the organic sector where regionalisation is an important theme: “source food as close by as possible and as far away as necessary” (Bionext, 2012).

5.1.5 Problems and barriers to further development of the market

Based on expert interviews, the Bionext (2012) report estimates that the export market has grown with 10% on average since 2011, but that this differs significantly depending on the product category. In general, experts from the sector expect that the same 10% growth rate will be achieved in 2013, although some uncertainty remains about the effect that the economic crisis may have on price developments. Furthermore, domestic limitations on the supply side will also put a strain on the growth potential of the organic export market, especially in the dairy and the pork sector. At the same time, other countries are picking up their production of organic eggs which will result in a decrease in the demand for Dutch organic eggs.

While experts foresee opportunities for the further development of the Dutch organic export market (e.g. in the emerging economies of Eastern Europe, the Russian Federation and China, and the growing demand for organic products in traditional export markets), the sector also identifies a number of threats (Bionext, 2012):

- Scarcity in organic resources;
- Image of the Dutch organic sector (high-tech organic);
- Quality of the certification organisation SKAL;
- Lack of harmonisation in organic regulations;
- Trade barriers because of private standards;
- Quality problems;
- Financing;
- Lack of long-term commitment of buyers.

Especially, the lack of long-term agreements between organic suppliers and their buyers may lead to shortages and price increases in the future, as farmers are only willing to switch to organic farming (which requires a two-year initial investment period) if they have delivery and price guarantees from the buyer.

Furthermore, sector experts warn for the increasing trend to source locally, i.e. from within the country or within the region. For example, the Dutch horticultural sector used to be an important supplier of organic apples to the neighbouring countries but is now forced to focus

primarily on the Dutch market. A similar process seems to be unfolding in the eggs sector. As a result, the Dutch organic sector is more and more limited to the role of topping up the local supply of neighbouring countries when they run out of own supply.

While this may be the case for the export market, the 'going local' trend may not have such a large impact on the domestic organic market. An interesting study of Vijn et al. (2013) links the organic sector to the increasing consumer trend of buying regional products. The study poses the question whether increased consumer interest in locally produced food will result in a decrease in the market share of organic products in the Netherlands. This negative correlation has been found in the United Kingdom where, according to the authors, a large share of organic products is imported. The study concludes that regional products do not pose a threat to organic products in the Netherlands and furthermore, that the trend may even present new opportunities for the organic sector by offering 'organic-local' products.

Interviews with stakeholders showed that the combination organic and local is seen as a logical combination but that it is not very common thus far. While this approach may offer opportunities, it does not necessarily create value added in all regions. For example, consumers in the densely populated west of the Netherlands value organic but find it less important that their food is locally produced. In other regions this relationship reverses and consumer's value products from their own region more but these do not need to be produced in an organic way. Another conclusion of the report is that most opportunities seem to lie in organic products from a recognisable producer, without those products having to be sourced locally. Nevertheless, the producer should be located in the Netherlands to prevent discussions about food miles.

5.1.6 Investment in research concerning organic production

The Louis Bolk Institute and Wageningen University and Research Centre are the main entities involved in research related to the organic sector. Biokennis gathers knowledge about organic agricultural and chain research of Wageningen University and the Louis Bolk Institute (see also <http://www.biokennis.nl>).

Research funding in the Netherlands is based on the so-called "top sectors policy" (topsectorenbeleid, see <http://www.rijksoverheid.nl> for more information). The Dutch government wants to focus its support on sectors in which the Netherlands already has a worldwide competitive advantage. The goal would be to profit from this head start and to make these sectors even stronger than they already are. To achieve this, the government, business, universities and research centres will cooperate on knowledge creation and innovation. Nine top sectors have been identified among which the agri-food sector and the horticultural sector.

Agreements between the key stakeholders have been established as "innovation contracts". These innovation contracts are driven by so-called top-teams in which researchers, entrepreneurs and government work together. Every sector has its top-team, which consists of: an innovative SME entrepreneur; a scientist; a representative of the government; a key player in the sector. Each innovation contract also includes a mix of instruments on the following domains: fundamental research; applied research; valorisation. Apart from the

innovation contracts, top teams have also established human capital agendas that should improve the connection between education activities and the labour market.

Finally, most innovation contracts aim at solving societal challenges. For example, to address the growing demand for food, the agri-food sector wants to develop sustainable food production, i.e. production that is energy efficient, environmentally friendly and that is not harmful for humans or animals.

The “organic research amendment” (bio-onderzoeksamendement) brings the organic sector into the top sectors policy. Bionext – together with the Ministry of Agriculture – has elaborated on how this policy can support the organic sector. Four strategic goals play a central role: eco-efficiency; more with less; connected chains; respect for animals. In the first half of 2013, the chain organisation Bionext has made an inventory of the knowledge needs in the organic sector. These needs have been translated into research proposals by Bionext in cooperation with Wageningen University and Research Centre and the Louis Bolk Institute. In June 2013, these research proposals have been presented to representatives of the organic sector.

Taking the knowledge needs from the private sector as a starting point for the development of the research agenda is crucial because within the top sectors policy, 40 to 50% of the costs of the research have to be financed by private businesses. Given this co-financing principle, there is some concern from the primary sector that businesses will be less interested in financing purely agricultural projects. Farmers are therefore advised to cooperate to collect (some of the) finances themselves.

5.2 PDO, PGI and TSG products in the Netherlands

5.2.1 Implementation

Registration of PDO, PGI and TSG products is done through the Ministry of Economic Affairs. The Ministry is advised by the Advisory Committee Geographic Indications, Denominations of Origin and Certification of Specificity (Adviescommissie Geografische aanduidingen, Oorsprongsbenamingen en Specificiteitcertificering, AGOS) about eligible products as well as objections to requests of registration in other member states.

Box 1. Procedure for application to EU quality schemes:

1. A producer (organisation) can submit a request for registration with the AGOS secretariat using the standard forms.
2. The Advisory Committee investigates if the request fulfils the EU regulations (EG nr. 510/2006 dan wel EG 509/2006).
3. If the Advisory Committee concurs with the application, the product file is published in the Announcements and Legislation journal of the Social Economic Service.
4. If no objections to the product file are received, the request is sent to the Ministry of Economic Affairs.
5. The Ministry forwards the product file to the European Commission in Brussels.
6. The European Commission investigates if the file fulfils all the requirements of the legislation and translates the product file in all EU languages for publication in the Publications journal of the EU.
7. If no objections are received after 6 months, the product is registered.
8. The producer (organisation) has to enrol in the controlling authority that was mentioned in the product file.

5.2.2 Market development of EU quality schemes in the Netherlands

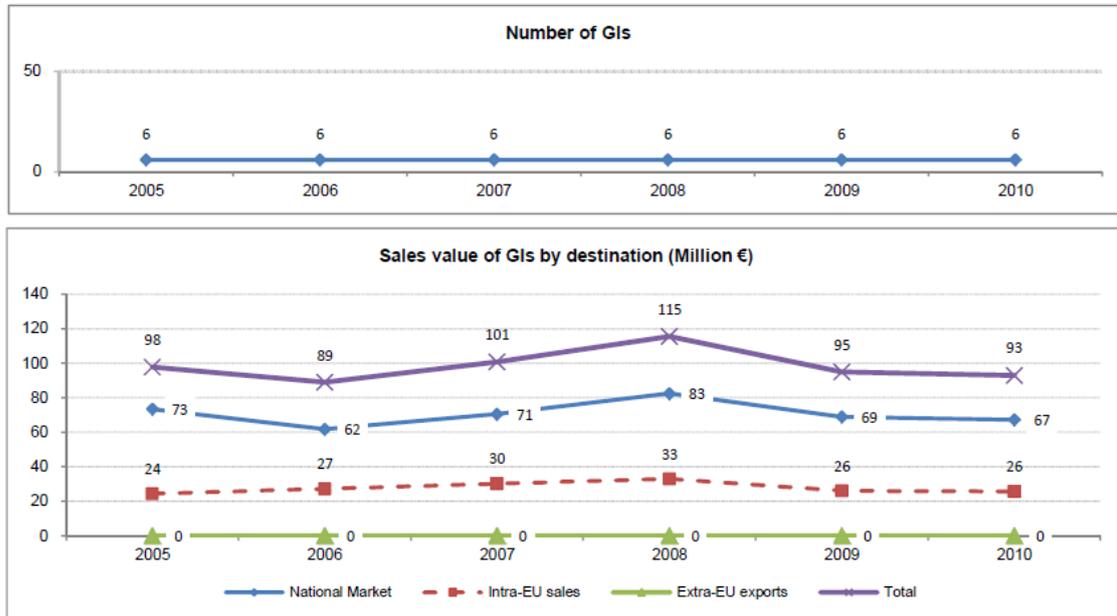
Introduction of the EU quality schemes for PDO, PGI and TSG has been limited in The Netherlands. There are only 9 products in total under the EU quality schemes: 5 PDO, 3 PGI and 1 TSG:

- Opperdoezer Ronde (PDO, 21 June 1996, Vegetables and Cereals fresh or processed)
- Boeren Leidse met sleutels (PDO, 13 June 1997, Cheeses)
- Kanterkaas, Kanternagelkaas, Kanterkomijnekaas (PDO, 8 September 2000, Cheeses)
- Noord-Hollandse Edammer (PDO, 21 June 1996, Cheeses)
- Noord-Hollandse Gouda (PDO, 21 June 1996, Cheeses)
- Westlandse Druif (PGI, 12 November 2003, Vegetables and Cereals fresh or processed)
- Boerenkaas (TSG, 16 February 2007, Cheeses)
- EdamHolland (PGI, 3 December 2010, Cheeses)
- GoudaHolland (PGI, 3 December 2010, Cheeses)

Two TSGs in the category “Confectionery, bread, pastry, cakes, biscuits and other baker's wares” have been requested and are under review: “Basterdsuiker”; “Suikerstroop, Goudstroop en Schenkstroop”. Figure 5 shows the evolution in number and sales value for PDO and PGI registered for The Netherlands.

Figure 5 PDO and PGI in the Netherlands until 2010

**Agricultural products and foodstuffs - PDO and PGI - Reg. (EC) No 510/2006
Netherlands**



For statistical confidentiality reasons, the breakdown of sales volumes and value by type of product is not available

Source: http://ec.EURpa.eu/agriculture/quality/schemes/index_en.htm.

5.3 Conclusions

In terms of PDO/PGI/TSG products, the Netherlands has only a limited number of products under these EU schemes. The most important ones in terms of sales volume and value (Gouda and Edam cheese) had already developed a strong market position – both domestically and internationally – before the quality labels were assigned. It therefore remains to be seen to what extent the EU quality label will improve the market position of these brands.

Bionext (2011) identifies a number of trends that are likely to affect the future development of the Dutch organic sector:

- Market. “Organic is a niche market”, is often claimed. However, studies have shown that at least two-thirds of consumers buy organic products from time to time. This seems to suggest that the market potential for organic is much higher than the current 2.3% and the market is not yet saturated.

- Products. In terms of sales’ volume, organic products are mainly situated in the fresh food categories (such as fruits and vegetables, dairy, meat and eggs). However, there is a trend towards increased use of organic ingredients in the processed food categories. This trend is mainly driven by the A-brands that are increasingly adding organic products to their product range. This trend may be followed by private labels and non-A-brands in the future.

- Prices. It is difficult to predict what will happen with the prices of organic products. On the one hand, increased scale-efficiencies are expected to lead to lower prices in the sector. On the other hand, organic producers may look for other ways to add value to their products, e.g. by differentiating products based on “the story behind the product”, or by adding the attribute of being locally produced. In this way, the price gap between organic and conventional foods may be sustained.

- Market channels. At the moment, the supermarket is the main market channel through which consumers buy organic products, followed by the organic specialty store. There is a large gap between 3% organic assortment in supermarkets and 100% in the specialty stores. It is obvious that the highest growth potential lies with the supermarket channel. The adoption of organic products has been slower in the HoReCa sector than in the retail sector. However, a large growth potential exists and wholesalers that are supplying the HoReCa sector are increasingly putting organic products in their assortment. The use of slightly more expensive organic ingredients is less of a barrier in the sector because ingredient costs only make up a small share in the total price. Furthermore, direct market channels and short chains (farm to consumer) are increasing in market share through farmers’ markets but also through home deliveries and online services.

- Consumers. “Anonymity is out”, consumers want to know the origins of the products that they buy. Information about the producer as well as the reputation of A-brands and retail private labels will increasingly play a role in creating trust in products. Furthermore, the drive towards conscious buying and societal value-added will stimulate the demand for organic products. Organic products will also need to jump on the train of convenience by developing ready-to-eat products and meals and by extending the assortment in the frozen foods department.

- Sustainability. There is increased attention for sustainability – by consumers but also by retailers and other market channel actors. Some consumers associate organic production and products with sustainable food. However, sustainability exceeds the legal requirements for the organic production and the sector should address a number of additional elements in order to become truly sustainable, e.g. use of energy, food waste, fair trade, bio-degradable packaging, and food miles. These issues extend beyond the production level and should be taken into account throughout the organic value chain.

- Monitoring. The organic sector is already intensively monitored. However, the sector puts increasing effort in quality controls to safeguard the sector against food scares that could affect the image of the whole sector. In the future, the sector will also be required to have identifiable indicators of its performance on different elements of sustainability (e.g. animal-friendliness; clean water; nutrient balance; energy-friendly; biodiversity; social aspects). These indicators should be made transparent for organic producers as well as processors.

- International developments. Organic agriculture and food are required to fulfil ever more extra-legal requirements in different countries. Some examples include Krav in Sweden that requires all organic companies to be CO₂-neutral since the beginning of 2012, the brand Ecosocial combines organic norms with fair trade requirements, and also the British Soil

Association, the German brands Bioland and Naturland and the international brand Demeter formulate new quality requirements every year.

In conclusion, key players and organisations have a positive view on the future development of the Dutch organic sector. The main opportunity will lay in the growing demand, especially in the supermarket and the HoReCa market channels. This will be driven by increased attention for conscious food choices, sustainable production and locally produced food. Challenges for the sector will be to make the production processes and the whole organic value chain more sustainable, i.e. by addressing issues such as energy use that are not (yet) included in the legal requirements. Extra-legal requirements already present challenges in some international markets. This challenge will also be affected by the price developments in the organic sector. Should prices for organic products decline, as expected, there may be little margin to implement further extra-legal requirements. Specific challenges for the organic export sector include the growing supply of organic products in the main destination markets and also the move towards locally sourced organic products in those markets.

5.4 References

Bionext (2012): Bionext Exporttrend Biologisch 2012, Bionext, Zelst.

Bionext (2011): Biotrends 2011. Trends en ontwikkelingen in de biologische sector. KSB Repro, Leeuwarden.

Ekomonitor (2006): Cijfers en Trends. Jaarrapport 2006. Biologica, Utrecht.

Hoogerduijn, E. and Pool, M. (2008): Aardappel met Smaak? Verkenning naar de markt voor een biologische aardappel welke zich onderscheidt op smaak. Praktijkonderzoek Plant en Omgeving B.V. Sector AGV, Lelystad.

Monitor Duurzaam Voedsel (2009-2012): Ministerie van Economische Zaken, Den Haag.

Vijn, M.P., Schoutsen, M.A., Monteny, A., Visser, A.J. (2013): Lelystad : PPO - AGV, 2013 (PPO publicatie 559) - 32 p.

WEB pages

Advisory Committee Geographic Indications, Denominations of Origin and Certification of Specificity (AGOS), <http://www.hpa.nl/voedsel-en-voeding/agos>

Biokennis <http://www.biokennis.nl/Pages/default.aspx>

Bionext <http://www.bionext.nl/zakelijk/feiten-cijfers>

CBS, PBL, Wageningen UR (2013). Biologische landbouw: aantal bedrijven en areaal, 1991-2012 (indicator 0011, versie 12, 13 mei 2013).

<http://www.compendiumvoordeleefomgeving.nl>, CBS, Den Haag; Planbureau voor de Leefomgeving, Den Haag/Bilthoven en Wageningen UR, Wageningen. (Compendium voor het Leefmilieu/Environmental Data Compendium)

<http://www.compendiumvoordeleefomgeving.nl/indicatoren/nl0011-Biologische-landbouw.html?i=11-61>

European Commission http://ec.EURpa.eu/agriculture/quality/schemes/index_en.htm

Rijksoverheid <http://www.rijksoverheid.nl>

6 Poland

Agata Malak-Rawlikowska, Dominika Milczarek-Andrzejewska, Jan Fałkowski

6.1 Organic-food market in Poland

6.1.1 EU and Polish regulations and institutions dealing with organic production

In the European union, both organic production and labeling of organic products are regulated according to Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91, 2007. Implementation of this Council regulation was laid down in detail in the Commission Regulation No 889/2008 of 5 September 2008.

The Organic Farming Act of 25 June 2009, regulates the conditions of organic production in Poland (Journal of Laws 2009, No 116, item 975). For the implementation of these regulations the Ministry of Agriculture and Rural Development is responsible.

In Poland, as in most EU countries, the control system of organic production consists of private certification bodies which are recognized and supervised by the designated authorities. The Polish system comprises of the following entities: the Ministry of Agriculture and Rural Development, which authorizes the certification bodies to carry out inspections and issuing and revoking certificates of conformity in organic farming; and the Agricultural and Food Quality Inspection (Inspektorat Jakości Handlowej Artykułów Rolno-Spożywczych IJHARS), which supervises the certification bodies and oversees the organic production.

IJHARS cooperates with other bodies like:

- Trade Inspectorate: in the field of retail marketing of live or unprocessed and processed agricultural products intended for human consumption.
- Veterinary Inspection: for animal feed.
- State Inspectorate of Plant Health and Seed: in terms of vegetative propagating material and seeds for cultivation.
- Polish Centre for Accreditation: a body which accredits certification bodies
- Certification Bodies: authorized to carry out inspections, issuing and revoking certificates in the field of organic farming.

In 2014, there are 10 certification bodies (May 2014), authorized by the Ministry of Agriculture and Rural Development (MINROL 2014).

6.1.2 Government support

Since Poland joined the European Union in May 2004, Polish organic farmers have received per hectare subsidies for organic farming under the European Union's rural development programs 2004-2006 and 2007-2013. However, in 1998 the Polish government introduced subsidies compensating the costs of organic farms control, and subsidies per hectare of organic crops for the period during which farms were shifting to organic production

(Kociszewski 2010). Furthermore, support for organic farmers provided within the RDP 2004-2006 was implemented in the framework of Package 2: "organic farming" under Measure 4 and last payments of RDP 2004-2006 funds were awarded in 2011. During the period 2007-2013 the support for organic farming continued within the agro-environmental program- as a part of Rural Development Plan and co-financed from *EAFRD* and public domestic sources. In this program, as in previous one, farmers were supposed to participate in the program for 5 years at least.

Table 44 EU RDP Subsidies to Polish Organic Farms within CAP 2007-2013, euro per hectare*

Products	Certified Organic	Ongoing Conversion Process
Crops	202	215
Permanent grassland	67	85
Vegetable production	333	397
Herbs	269	295
Horticulture and fruit production	395	461
Other	167	205

*calculated based on 3.9 zł/euro exchange rate.

Source: ARMiR - Agency for Restructuring and Modernisation of Agriculture.

6.1.3 Production

In 2013, there were 27,093 organic farms -divided between certified and under conversion-cultivating 669.9 thousand ha (over 4,6% of total cultivated area in Poland). Compared to 2004, the number of producers increased sevenfold (see table 45). The average organic farm size is almost twice as large as the national average farm and equals to 24 ha (IJHARS 2014). In 2013, around 73 percent of organically managed land was fully converted (IJHARS 2014, Waszewska 2014). Almost 70 percent of the land in 2012 was allocated under fodder crops (permanent grassland and green fodder from arable land) that provides good conditions for organic certified livestock production. Cereals accounted 2012 for 18 percent, while permanent crops (mainly fruits: apples, cherries, raspberries, strawberries, pears and nuts) covered 9 percent of the certified organic land (Eurostat 2014).

Table 45 The number of organic food producers in Poland 2004-2013

Year	2004	2006	2008	2010	2011	2012	2013
Organic food producers	3760	9364	15206	20956	23847	26376	27093
Processing companies	55	170	236	293	270	312	407
Farms	3705	9194	14970	20663	23577	26064	26686

Source: based on data from IJHARS 2004-2013.

In 2012, farms with an area up to 20 hectares accounted for 68.9% of the total number of organic farms. Among them 25,5 % of organic farms were farms with a crop area of 10 to 20 hectares (see table 46). The largest organic farms with more than 100 hectares, accounted for 4.6% of the total number of farms.

Table 46 Organic farms structure in 2012

	Number of farms	Share [%]
under 5 ha	5,001	19.3
5-10 ha	6,257	24.1
10-20 ha	6,626	25.5
20-50 ha	4,514	17.4
50-100 ha	2,355	9.1
over 100 ha	1,191	4.6

Source: based on data from IJHARS.

The food processing industry is a significant factor in the functioning of organic farming in Poland and unfortunately, despite of an increase of the number of organic processing plants, its poor development is still a barrier for progress (Pilarczyk and Nestorowicz, 2014; Kociszewski, 2010).

In 2013, there were 407 certificated processing plants in Poland. Their number doubled since 2007, and was sevenfold more than in 2004. Most of the total number of organic processing plants operating in 2012 (312 processors), were involved in fruit and vegetable processing with 31.6%, and in milling grains with 23.6%. Smaller shares of processing represented such products as meat with 7%; coffee and tea with 5.0%, and milk with 4.7%. About 25% of processing plants produced other food products such as: spices, beverages, cocoa, chocolate, confectionery, ready to eat meals and other processed products (IJHARS 2013).

6.1.4 The organic market

A characteristic feature of the organic food market in Poland is its considerable dispersion and the mismatch between supply and location of demand. On the production side, there are small farms that have little market power. On the one hand, production dispersion affects

selling negatively, which is the most common reasons for the resignation of farmers from organic production. On the other hand production dispersion is a primary cause of extensive wholesale trade. The operation wholesaler is important not only in terms of the supply of the domestic market, but also prospects for export growth of organic food. Wholesale is dominated by regional firms, besides which operate a few small-scale wholesalers at the national level (Zuba, 2012).

The value of the polish organic market was estimated in 2012 by the polish press agency with 194 million USD with an expected increase to 226 million USD by 2015 (Healy and Figurska, 2013). The sale of organic food is run mainly by specialized grocery stores (e.g. shops with natural “healthy” food), some of the hypermarket chains (e.g. Tesco, Carrefour), supermarkets and delicatessen chains (e.g. Piotr i Paweł³⁰, Alma Market), and market places or directly by farmers. Estimates indicate that there are 500 natural food shops that specialize in organic products in Poland. The majority are located in the capital Warsaw with around 70 shops (Pilarczyk and Nestorowicz, 2014).

In 2008, the most sold organic products were cereal products and seeds, followed by juices, vegetable preserves and by fresh vegetables and fruits. It is expected that there will be an increase in the domestic product range due to the increasing number of processors and a better organization of the the supply chain. Fresh products will become widely available and the sales of organic fresh production will increase (Vaclavik and Szeremeta 2008; SIPPO and FiBL 2011).

It is estimated that the prices of organic food are 10% - 40% higher than those of the conventional food products. This results from specifics of organic farming, where the production costs are higher and the production volume is lower compared to conventional farming (Pilarczyk and Nestorowicz, 2014). Consumer’s knowledge is a key component to the expansion of the organic sector in Poland. For many consumers, the price difference between organic and conventional goods may be too big (for those facing budget constraints, or not fully understood) and therefore greater than their willingness to pay (Healy and Figurska, 2013). A survey was conducted by *Sylvia Żakowska-Biemans* in 2003, which shows that Polish consumers buy organic food because of health reasons, taste of organic food and concerns about the environment (Szeremeta, 2005).

6.1.5 Import and export of organic products

Exports of organic products from Poland are not significant. A few exporters sell fruits and vegetables for processing (frozen black and red currants, strawberries, wild fruits, canned cucumbers and cereal coffee). And it is important to note that the lack of organization of small farms is one of the biggest barriers to the development of the export sector. More and more, Polish processors produce organic products for foreign brands as subcontractors. Export of processed food under Polish brands is very limited (SIPPO and FiBL, 2011).

The organic market is not well developed, partly due to the low number of processors and the low range of processed products available, resulting in a number of organic imported products being offered (Vaclavik and Szeremeta, 2008). In 2011, in Poland there were 17

³⁰ Polish delicatessen chain

organic producers, controlled by the certification bodies and approved for imports of organic products from third countries. In 2012, this number increased to 30. Thirty percent of organic products consumed in the country are estimated to be imported (Vaclavik and Szeremeta 2008). The most relevant imported products are cereal products, juices and oils. The key countries of origin are Germany, Italy and France. In some cases, Polish processors import some organic raw materials when there are problems with domestic supply due to either a lack of availability, the product being out of season, or, on occasion, due to high prices (SIPPO and FiBL 2011).

6.2 PDO, PGI, TSG products in Poland

6.2.1 Regulations and government support

Polish farmers are trying to actively exploit the opportunities offered by EU's agricultural product quality policy. This is reflected by the steadily rising number of foodstuffs which farmers seek to register under the Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed (TSG) schemes. According to the Polish Ministry of Agriculture and Rural Development in 2014 there were 36 products registered within this EU quality schemes in Poland.

The authorities and bodies involved in the control and certification system of products registered as PDO, PGI or TSG are (IJHARS web page):

1. The Minister with competence in agricultural markets who authorises the certification bodies to carry out controls and to issue and withdraw certificates confirming that products registered as PDO, PGI and TSG meet the requirements laid down in the specification.
2. The Chief Inspector of Agricultural and Food Quality Inspection (AFQI) who supervises the certification bodies authorised by the minister with competence in agricultural markets.
3. The Voivodeship Inspector of Agricultural and Food Quality Inspection (AFQI) who carries out verification with compliance with specification of products with PDO, PGI and TSG.
4. Authorised certification bodies, which carry out verification with compliance with specification of products with PDO, PGI and TSG. 6 authorised certifying bodies in regional and traditional products operate in Poland.

The selection of certification body is made by producers who cover the costs of the inspection. This inspection has the objective of checking whether the product that is produced complies with the declared specification. The scope and frequency of checks depend on the product's manufacturing process.

The regional and traditional food sector is expanding rapidly in Poland. In addition, more producers want to produce quality food. This is why special support measures have been designed for them under the Program for the Development of Rural Areas for the years 2007-2013 (TheWarsawVoice 2012). The main instrument of investment support the processing and marketing of agricultural products under RDP 2007-2013 is the action 123 "Adding value to agricultural and forestry production," which can support projects of producers dealing with marginal, local and niche activity. This action had the minimum support limit of 100 thousand Zloty (about 24000 euro). For smaller investment projects

(support less than 100 thousand Zlotys per beneficiary) investments in the processing and marketing of agricultural products can be supported under Axis 3 measures, action 312 "Creation and development of micro-enterprises" and 311 "Diversification into non-agricultural activities. There is no detailed data on the utilization of these measures by PDO, PGI or TSG product producers.

6.2.2 GI Products and production

In July 2014, there were 36 Polish products registered within the EU quality schemes, 9 in the Protected Designation of Origin (PDO) scheme, 18 in the Protected Geographical Indication (PGI) scheme, and 9 in the Traditional Speciality Guaranteed (TSG) scheme (see appendix)

The Polish market of traditional products is diverse. A leading group of farmers are selling products directly on the farm or the local markets, rarely leaving the province. The second group consists of local producers, owners of small butcher shops, bakery, fruit and vegetable processing plants, municipal cooperatives for which traditional products have become a chance for survival. Small local dairies also opted for tradition and produce natural cheeses and butter.

In 2011, the number of producers of PDO/PGI/TSG products reached 226 (Borowska, 2012). Almost half of them (106) produced Rogal Swieto-marcinski (crescent-shaped bun), and together 57 producers offered regional fruits: strawberries, cherries and apples. Since these are mainly small entities, generally the scale of production does not satisfy the demand for the offered products. Thus, it becomes an important issue for the future presence of the product on the market (in the larger scale) to cooperate among individual producers/processors. The common goal would be the concentration of production, supply, sales planning, and promotion of the quality product as well as stabilisation of prices.

6.2.3 The market

Sellers of traditional products are represented by manufacturer's of a product directly, small shops with organic and natural foods and gourmet delicatessens such as Peter and Paul, Bomi Alma Market, Krakowski Kredens, Mini Europe, where owners, as one of the first, recognized the commercial potential of regional products. There are also some organic wholesalers like Organic Health, Organic Planet, Vita, which often have their retail shops in shopping galleries. A significant barrier of the market development of the traditional products are their high prices, exceeding the purchase capacity of average polish inhabitant. They are about 50 - 100 percent higher than the prices of similar products in the supermarket chains, so not many people can afford to buy them (Byszewska 2009). The share of local regional and traditional products in the food market in Poland is estimated at 1-3 per cent., which is still small in comparison to the other EU countries (AgriNatura 2013). However, the market analytics and traders estimate that the value of the domestic market for traditional food in Poland will continuously grow, because consumers show more and more interest in the unique qualities that distinguish traditional products from the bulk production, different methods of production, and the relationship with the region or place of origin.

According to Chudy and Gierałtowska (2013), the most common buyers of regional products are young people (Pomianowski 2009). This is confirmed by Żakowska-Biemans (2012)

which states that 57% of respondents aged 20-29 often buy traditional food. In addition, students declare that the ratio of the average monthly amount that could be spent on regional food, relative to the total expenditure amounts to 40.9% (Borowska 2007). Data from Grzybek (2009) and Chudy and Gierałowska (2013) show that consumer preferences are focused primarily on high-quality regional products, which draws attention to 84% of the total respondents. According to Bak-Filipek (2007), the generations reproduce traditions, seek for exceptional, old family recipes, which are often already forgotten.

Oscypek (registered in 2008) is a type of smoked sheep cheese. Its name is connected with production process and it is derived from two meanings: “crumble”, part of production process, and “small spear”, shape of the cheese. It is an old product of Wallachian shepherds. It came to Poland to Podhale region together with whole Wallachian culture, sheep pasturage organisation, method of flock-master’s hut maintaining, milk processing. First information about cheese production in Podhale and adjacent areas comes from 1416 – the location of Ochotnica village. Milk for oscypek production comes from Polish mountain sheep, which is an improved type of the original sheep breed that lived in the Eastern Carpathians and Balkans. This breed is closely associated with the history and tradition of Podhale, it is perfectly adapted to climatic conditions and traditional systems of pasture in mountain areas. The breed “Polish mountain sheep” eats specific plants which occur as endemic species in Podhale. This gives the milk products a specific taste and flavor. (Magda-Zabinska 2010). In 2011 there were 16 registered producers of this special cheese. The total declared production in 2011 reached 18.8 thousand kg. (Borowska, 2012).

6.3 Conclusions

The organic market in Poland develops very dynamically. In 2013, there were 27,093 organic farms, and compared to 2004, the number of producers increased more than sevenfold. The food processing industry is a significant factor in the functioning of organic farming. In 2013, there were 407 certificated processing plants in Poland. Their number doubled since 2007, and was sevenfold more than in 2004. Despite of this progress, the poor development and barriers for growth of organic market in Poland are observed. A characteristic feature of the organic food market in Poland is its considerable dispersion and the mismatch between location of supply and demand. On the production side there are small farms/firms that have little market power. Production dispersion affects, on the one hand, the existence of multiple difficulties in selling, and on the other hand, is a primary cause of the poorly extensive wholesale trade.

Experts do not have a common opinion on the development of the organic market and organic export prospects in the future. On the one hand organic farming can be viewed as an alternative form of development for a considerable group of farms, especially those being relatively small in size and farming in unfavourable conditions, within the borders of nature parks or close to big cities. Also observed, positive trends like an increase of the number of organic producers and processing companies can be seen as an advantage for the future development. On the other hand the barriers at the downstream segments of the chain (unadjusted wholesale, consumer demand limited by prices), could hinder development of the market for organic products.

Similar situations occur in case of the traditional food products. It is expected that the value of the domestic market for traditional food produced within quality schemes in Poland will grow, due to increasing demand for unique qualities that distinguish traditional products from the bulk production. According to Polish Ministry of Agriculture and Rural Development in 2014 there were 36 products registered within PDO, PGI and TSG quality schemes in Poland. Data show that consumer preferences are focused primarily on the high-quality of traditional products. The young generations reproduce traditions, seek for exceptional, old family recipes, which are often already forgotten. However development of the market for quality schemes must be supported by intensive promotion campaigns, building awareness of consumers for the unique quality and recipes. Improvement of the market organization regarding sales structures and wholesale is also an important factor for the development of a traditional food market in Poland.

6.4 References

- AgriNatura (2013). Produkt tradycyjny i lokalny: promocja, marka, dystrybucja – przykłady dobrych praktyk. Raport do Działania 3.1 Identyfikacja dobrych praktyk w zakresie wytwarzania, promocji, budowania marki i dystrybucji produktów lokalnych/regionalnych/tradycyjnych na poziomie ogólnokrajowy. Fundacja Rolniczej Różnorodności Biologicznej AgriNatura na zlecenie FAPA.
- Bąk-Filipek E., (2007). Instrumenty promocji produktów regionalnych. Pr. Nauk. Katedry Polityki Agrarnej i Marketingu, SGGW 41: 401-413.
- Borowska A., (2007). Charakterystyka konsumentów produktów tradycyjnych/regionalnych w Polsce. Raport z badań. <http://www.potrawyregionalne.pl/>
- Borowska A., (2012). Rola żywności regionalnej w zrównoważonym rozwoju obszarów wiejskich w Polsce. Trendy i wyzwania zrównoważonego rozwoju w XXI wieku. Handel Wewnętrzny T.2. p.19, Szczecin 2012.
- Byszewska I., (2009). Żywność regionalna i tradycyjna - nie tylko dla koneserów. Fresh and Cool market. 01/2009
- Chudy S., Gierałowska U., (2013). Produkty tradycyjne i regionalne z perspektywy szczecińskich studentów. Journal of Agribusiness and Rural Deveelopment 1(27), 45-52
- Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and co. (18. September 2008). Official Journal of the European Union, 51.
- Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91. (20. July 2007). Official Journal of the European Union, 189(1), 1-23.
- Eurostat (2014). Agriculture and Fisheries. Statistics Database accesses in July 2014.
- Grzybek M., (2009). Preferencje konsumentów z Podkarpacia dotyczące popytu na produkty regionalne. Journal of Agribusiness and Rural Deveelopment 1 (11), 103-110.

- IJHARS (2013). Raport o stanie rolnictwa ekologicznego w Polsce w latach 2011-2012. Inspektorat Jakości Handlowej Artykułów Rolno – Spożywczych, Warszawa 2013.
- IJHARS (2014). Liczba producentów ekologicznych w polsce i powierzchnia upraw ekologicznych w latach 2004-2013 Warszawa: Główny Inspektorat Jakości Handlowej Artykułów Rolno – Spożywczych (IJHARS). Available at: <http://www.ijhar-s.gov.pl/index.php/raporty-i-analazy.html>. Accessed July 2014.
- Kociszewski, K. (2010). The development of organic farming in Poland under the conditions of integration with the European Union. *Economic and Environmental Studies*, 10 (1), 11-22, March 2010.
- Magda-Zabinska K., (2010). Regional Products as the Expression of Preservation of Regional Individuality in the EU. In *Beyond Globalisation: Exploring the Limits of Globalisation in the Regional Context* (conference proceedings), 189-195. Ostrava: University of Ostrava Czech Republic, 2010. <http://conference.osu.eu/globalization/publ/23-magda-zabinska.pdf>.
- MINROL (2014) Ministerstwo Rolnictwa i Rozwoju Wsi. www.minrol.gov.pl/pol/Jakosc-zywnosci, access 07/2014.
- Pilarczyk B., Nestorowicz R., (2014). The organic food market in Poland – opportunities and threats to its development, Conference paper nr. 297, International Marketing Trends Conference 2014, Venice, Italy.
- Pomianowski F.J., 2009. Badania konsumenckie żywności regionalnej. In: Mater. na międzynarodową Konferencję Naukowo-Promocyjną „Żywność regionalna i tradycyjna – aspekty surowcowe, technologiczne i ekonomiczne”. Uniwersytet Warmińsko-Mazurski, Olsztyn, 223-225.
- SIPPO & FiBL (2011). Lukas Kilcher, Helga Willer, Beate Huber, Claudia Frieden, Res Schmutz, Otto Schmid 2011: *The Organic Market in Europe: 3rd edition* May 2011, SIPPO, Zurich and FiBL, Frick.
- Szeremeta, A. (2005). *Organic farming and market in Poland*. Warsaw, Poland: European Network of Organic Agriculture Students.
- TheWarsawVoice (2012). Polish Regional and Traditional Products. The Warsaw Voice Online article published on 21/12/2012
- Vaclavik T., Szeremeta A., (2008). In: Osch, Susann van, Burkhard Schaer, Claudia Strauch, Caroline
- Zuba, M. (2012). Chances and barriers in the integration of the chain of the organic food in Poland. Poland: *Zeszyty Naukowe WSEI seria Ekonomia*.
- Żakowska-Biemans, S., & Gutkowska, K. (2003). Rynek żywności ekologicznej w Polsce i w krajach Unii Europejskiej. Poland: Warszawa : Wydawn. SGGW.
- Żakowska-Biemans S., (2012). Żywność tradycyjna z perspektywy konsumentów. *Żywność. Nauka Technologia. Jakość* 3 (82), 5-18.
- Waszewska M. (2014). Producenci ekologiczni w Polsce w 2013 roku. *Wiedza i Jakość*, NR 2 (35)/2014, available at: <http://www.ijhar-s.gov.pl/pliki/A-pliki-z-glownego-katalogu/ethernet/2014/czerwiec/WiJ%20%202014.pdf>

7 Romania

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7.1 Organic-food market in Romania

7.1.1 Implementation

As organic farming contributes to sustainability, through an increase of biodiversity, soil fertility and environmental protection, the organic farmers are supported through agro-environmental programs of the European Commission (EC). Thus, starting with 2007, the year of Romanian accession to EU, organic farmers benefit from a compensatory premium per hectare (and by crops), in order to make up for the income losses incurred during the conversion period and for the certified production, through the National Rural Development Programme (PNDR) – Axis 2 – the agro-environmental sub-measure, from the European Agricultural Fund for Rural Development (EAFRD), and non-refundable support in conformity with the Commission Regulation (EC) no. 1698/2005.

At the same time, EU provides support for the promotion of organic products through co-financing programs, with a 50% funding from the EC, 20% from professional organization, and 30% from the state budget, in conformity with the procedure of the Commission Regulation (EC) no. 1071/2005.

At the national level, together with the signing of the Association Agreement and the initiation of the EU accession negotiations, Romania's legislation had to get in line with the EU legislation. Following this process, at present, Romania's legislation complies with EU requirements and orientations.

The main normative acts are: Government's Emergency Ordinance (OUG) no. 34/2000 on the organic agri-food products, approved by Law no. 38/2000; Government's Decision no. 917/2001, for the approval of the Methodological Norms for the application of provisions from OUG no. 34/2000 regarding the organic agri-food products; The Joint Order no. 417/2002 and no. 110/2002 of the Minister of Agriculture and of the President of the National Authority for Consumers' Protection; Order no. 70/2002 of the Minister of Agriculture on the establishment of the Commission for Organic Farming Development in Romania; Order no. 527/2003 of the Minister of the Agriculture for the approval of the Rules on the inspection and certification system and the accrediting conditions for the inspection and certification bodies in organic farming; Order no. 721/2003, of the Minister of Agriculture for the approval of rules on the import and export of organic agri-food products; Order no. 153/2006 regarding the approval of the component of the Commission for the accrediting of inspection and certification bodies in the organic farming sector, which inspects and controls the operators on Romania's territory; Order no. 317/2006 regarding the modification and completion of the Annex to the Order of the Ministry of Agriculture and of the President of the National Authority for Consumers' Protection no. 417/110/2002, for the approval of the specific labelling rules for the organic agri-food products; OUG no. 62/2006 for the modification and completion of OUG no. 34/2000 on the organic agri-food products; Law no. 513/2006 on the approval of OUG no. 62/2006 for the modification and completion of OUG no. 34/2000 regarding the organic agri-food products; Order no. 219/2007 on the approval of rules

regarding the organic farmers' official registration. All these provide information, rules and norms necessary in this field like: the authority responsible for organic farming; the general rules and principles of organic production; the duration of the conversion period; the inspection and certification system; the list of accepted products to be used by the organic farming practice; the list of ingredients and processing methods that can be used in the preparation of organic foodstuffs; sanctions etc.

In Romania, the government, the civil society and the business environment are becoming increasingly aware of the need to promote organic farming.

The governmental policy is elaborated and coordinated by the Ministry of Agriculture and Rural Development (MADR), under which the office of the National Authority for Organic Products (ANPE) is operating, which is the authority in charge of the organic farming sector. ANPE is collaborating (or collaborated) with different agencies, education and research institutions, foundations, among which we can list the following:

- The Academy of Agricultural and Forestry Sciences (ASAS);
- Higher education institutions, agricultural research institutes and stations;
- The National Organic Farming Federation, whose activity is based on the “sustainable development principle”, a development type which should not disable the next generations' access to a clean environment.

The Ministry of Agriculture establishes an action plan for the development of the domestic market of organic products, which includes:

- The intensification of actions promoting the organic farming concept;
- The improvement of information on organic farming practice, and the qualification of the participants in this sector;
- The increase of areas under the experimental modules “organic micro-farms”;
- The delimitation of organic farming areas;
- Support to farmers during the conversion period;
- The creation of an information system accessible to farmers.

7.1.2 Supply side

The data supplied by MADR reveal the increasing importance of this sector for the domestic producers. The positive evolution of the areas and production in the organic farming sector prove the existing potential, initiative, development prospects and increasing demand from the consumers' part.

In the following tables (Table 47, 48 and 49) the MADR statistics is presented, providing insights to the organic cultivated area, production and organic operators before and after accession.

Table 47 Areas under organic farming system before accession (2000-2006). In ha

Specification	Achieved						2006
	2000	2001	2002	2003	2004	2005	
Total area, out of which:	17,438	28,800	43,850	57,200	73,800	110,400	143,000
Cereals	4,000	8,000	12,000	16,000	20,500	22,100	16,310
Pastures and fodder crops	9,300	14,000	20,000	24,000	31,300	42,300	51,200
Oilseeds and protein crops	4,000	6,300	10,000	15,600	20,100	22,614	23,872
Vegetables	38	100	700	200	300	440	720
Fruits (cherries, apples)	-	-	50	100	200	432	292
Spontaneous flora collection	50	100	300	400	500	17,630	38,700
Other crops	50	300	800	900	900	4,884	12,100

Source: Voicilas, D.M. (2007)

Land areas increased in the mentioned period. The trend is increasing and the perception of these crops as an alternative activity and income source is positive. Comparing the objectives established by the government's strategy with the field results, we could say that the objectives were reached; the bases were created for the development of this activity and for the use of the market niches, both on the domestic and world markets.

Table 48 Organic farm production before accession (2000-2006), in tonnes

Specification	Achieved						2006
	2000	2001	2002	2003	2004	2005	
Total crop production	13,502	24,400	32,300	30,400	87,200	131,898	166,574
Cereals, out of which:	7,200	12,500	16,000	14,400	41,000	55,000	48,441
*export	-	-	-	-	7,100	11,100	18,100
Oilseeds and protein crops, out of which:	5,500	7,200	11,000	12,480	37,000	45,600	73,082
*export	-	-	-	-	9,800	12,100	22,100
Vegetables	600	4,000	4,000	2000	3,000	7,200	8,708
Fruits (sour cherries, cherries)	-	-	200	300	500	1,000	340
Spontaneous flora collection :	200	400	300	320	4,500	16,748	24,962
*export	-	-	-	-	3800	14,200	-
Other crops	2	300	800	900	1200	6350	11,041

Source: Voicilas, D.M. (2007).

As in the case of land areas, production continuously increased in the investigated period. Although the production levels are much higher than those obtained 5-6 years ago, the domestic supply cannot totally meet the demand yet, which makes it possible for imported organic products to penetrate the Romanian market, as we shall see later on.

In Table 49, we present the evolution of the organic agriculture in last years, after the accession into EU.

Table 49 Areas and producers in organic agriculture after accession (2007-2012)

Indicators	2007	2008	2009	2010	2011	2012
Number of farmers	3,834	4191	3228	3155	9703	26,736**
Arable area (ha)	65,112.0	86,454.0	110,014.4	148,033.5	151,109.0*	164,936.9
Permanent crops of pastures and fodder (ha)	57,600.0	46,006.5	39,232.8	31,579.1	78,198.0	105,835.6
Permanent crops of orchards and grapevine (ha)	954.0	1,518.0	1,869.4	3,093.0	4,166.0	9,430.0
Spontaneous flora collection (ha)	58,728.0	81,279.0	88,883.4	77,294.4	80,120.0*	1,088,641.3

Note: * = estimations; ** = producers, processors, traders, importers, exporters

Source: MADR database – County Agricultural Departments (www.madr.ro).

According to the last data from MADR, in 2012 the areas under organic agriculture increased fantastic, due to the facilities supported by the ministry and the EU funds at the producers' disposal, on one side and on the other side due to changes of the classification of organic producers (this was mainly due to the existing support measures for the period conversion granted under art. 68 of Regulation (EC) nr. 73/2009 laying down common rules for direct support schemes for farmers under the Common Agricultural Policy and establishing certain support schemes for farmers). In the same time, there are estimations that the number of organic operators increased in the same way, nowadays being over 10,000, in 2011 (<http://www.eco-ferma.ro/performantele-agriculturii-ecologice/>) and over 26,000, in 2012 (http://old.madr.ro/biofach2013/Anexa_sector_ecologic_romana.pdf).

7.1.3 Demand side

On the Romanian market, the organic product range is quite limited. On the national market, in 2011, were sold: vegetables and fruits, processed fruits and vegetables, herbal teas, bread, pasta, flour products, processed cow and sheep milk (butter, feta cheese), eggs, oil, wine made from grapes certified organic, processed soy products, honey, etc. Most food is brought from abroad (canned vegetables, fruits, bread). Bestseller organic products are milk, eggs, yogurts, fruits, vegetables, and meats.

Immediately after joining the EU, total sales of organic products in Romania reached about 10 million EUR, which represents less than 1% of the retail market and very little compared to 5-6%, as is the European average (2008).

At the beginning of the year 2007 (Romanian accession into EU), the following organizations were registered at MADR, with attributes or concerns in organic farming, rural development, environment protection and sustainable development³¹: The Association for ecological agriculture "agri-eco", with its headquarters in Cluj Napoca, the professional Organization „Agroecologia” – Cluj Napoca, the Association of bio-farmers in Romania „BIOTERRA” – Cluj' county, the Romanian Association for Sustainable Agriculture – Călărași County, the

³¹ Voicilas, D.M. (2007): Alternatives of rural development-organic farming. In: Multifunctional agriculture and rural development – Rural values preservation. Institute of Agricultural Economics-Beograd, ISBN 978-86-82121-48-0, Beograd/Beocin, Serbia

Association „Terra Verde” – Bucharest, the Association of the Bio-poultry breeders in Romania – BIOAVIROM – Ilfov County, the Association for organic farming development in Romania, „Ecofocus” – Bucharest, Ecorural – Bucharest, the Association for the Environmental Protection and ecological agriculture „TER” – Bucharest, the Foundation „Mama Terra” – Bucharest, „The National Association of Agricultural Consultants” – Bucharest, the Academic Foundation for Rural Progress „TERRA NOSTRA” – Iași, „The Ecologist Society in Maramureș” – Baia Mare, „The Foundation for Rural Development in Romania” – Bucharest, „The Ecological Group for Cooperation Bucovina” – Suceava, the Foundation „Business School Mehedinți” – Drobeta Turnu Severin, the Society „Avram Iancu” – Cluj Napoca, the Foundation „The Operation Romanian Villages” – Bacău county, „The Ecological Club Transylvania” – Cluj Napoca, „The Romanian Rural Foundation” – Timișoara, „Bioclub Cluj” – Cluj Napoca, „the Group of Gardeners Biodynamics” – Târgu Mureș, „the Romanian Association for Applied Biofarming” – Arad county, „the Centre for Ecological Consulting Galați” – Galați, „the Association for Environmental and Nature Protection” – Târgu Mureș, the Foundation „Divers Eco” – Maramureș county, the Foundation „Noema Consulting” – Cluj Napoca, the Association „Albina” (the „Bee”) – Bucharest, the Association for Environment Protection and Preservation of Resources – Bucharest. In Annex 1, we present a list of organizations active in organic agriculture, rural development, environmental protection, and sustainable development, at the end of 2012.

Organic operators (farmers) were registered at MADR and classified by three large categories of products: crop, livestock and beehive products. The farmers are organized either as independent producers, physical entities, family associations, commercial companies, as legal entities under the form of limited liability companies, or joint stock companies. Most organic farmers are from a few counties: Suceava (North), Mureș and Sibiu (Center), Tulcea and Constanța (South-East).

Following the presentation of these statistical data, organic farming could be considered as a dynamic sector in Romania, with an increasing trend in recent years. As a result, the organization of the marketing (www.agricultura-ecologica.ro) of organic products is an increasingly important element in this sector. The sale of organic products can take place directly from the farm, or through traders registered at MADR. The organic products are found both in large store network and in mall-specialized shops. At the beginning of the year 2007, only two shop networks were registered at MADR: the shop „BIOCOOP” (Sibiu) and the shop Naturalia (www.naturalia.ro), with units both in Bucharest and in the county Ilfov (Voluntari). After one year, there were 6 shops. At the end of 2012 there are already 25 shops registered.

Except for the processors that have their own presentation shops, not all shops respect the storage/handling/presentation rules for organic products. The organic products are found in the same place with the conventional products; they are handled and stored together. In the Expert Group study (2007), it is also shown that on the domestic market there is confusion between „natural product” and „organic product” (most often maintained by the producers of the former), which makes it more difficult to promote an organic product under the conditions of the price difference.

Sale on the domestic market takes place through the wholesale networks Metro, Selgros, and mainly by retail shops. The main stores that introduced organic products in their assortment of goods are: Carrefour, Cora, Gima, La Fourmi, Mega Image, Nic, Primavera, and OK.

7.1.4 Trade

An important role in market promotion and obtaining new market shares and segments of consumers is represented by the marketing activity. The presentation of products, the beneficial effects upon the human body, the gains obtained by buying clean and healthy products, even though they are more expensive than the conventional products, as well as consumers growing aware of their importance, are the main concerns that the producers and sellers of organic products should have in their development policy. The participation in exhibitions, fairs and other national and international manifestations is a modality to present the organic products and to establish new contacts for marketing these products. It is only a promotion modality among several possibilities, but with a special impact upon consumers.

The fact that the organic products have a market in Romania is proved by imports, which are doubling almost every year. In 2007, the market of organic products was estimated at EUR 2.5 mil (1 mil EUR more than in 2006, before accession). At that time, about 70% from the organic products on the market were imported. At the end of 2010 the exports accounted about EUR 150 mil. and imports about EUR 35 mil. (<http://www.eco-ferma.ro/performantele-agriculturii-ecologice/>).

The Expert Group study (2007) reveals that about 30% of the organic production was sold on the domestic market (the rest was exported). The main organic products sold through the organized commercial network were eggs and dairy products.

In 2012 70-80% of produced organic products were exported. Romanian organic products are mainly exported to Western Europe (Germany, Italy, Switzerland, and Netherlands for example) and attempts are being made to penetrate the US market. Wild berries, either organic or non-organic, have a much higher export price, and the price is even higher if these are organically certified. Main exported products are: cereals, oilseeds and protein, berries, herbs, honey and sheep cheese.

The reaching of export targets is linked to other objectives as well (on the short, medium and long-term), which can contribute to the improvement of the competitiveness of the Romanian organic sector in the next period:

- The increase in the number of operators in this sector, receiving financial support from the Romanian government programs;
- Increase of the role of non-governmental organizations (NGOs) in this sector through programs for the development of trade with organic products;
- Increase in the number of exporters who are actively involved in programs for organic agricultural trade development in the less-favoured areas;
- Support provided to organic commercial farms, so as to be more active on the market;
- Forming an association of small organic farmers so as to co-operate in the marketing of organic products;

- Increase in the number of municipal and regional organizations directly involved in the implementation of the National Export Strategy in its initial stage;
- Increase in the number of local processing units and foreign direct investment projects;
- Increase of investments in related activities in rural areas;
- Increase in the number of employees in the exporting units which are implementing the organic farming regulations;
- Increase of investments in the activities related to exportable organic products from the less developed rural areas;
- Increase of the organic farm output;
- Increase in the number of new companies involved in export activities with primary and processed organic agricultural products;
- Increase in the number of optimal operation modules by the association of crop and livestock farms;
- Development of processing capacities for the organic farming sector;
- Capacity improvement in terms of products and value added;
- Development of services oriented towards the export of organic products;
- Diversification of the exportable cultivated species (for example: vegetables, fruits) and of the range of processed products (e.g.: bakery and pastry products);
- Increase in the number of new approved investment projects.

7.1.5 Tendencies and problems

Unfortunately, not all the producers are satisfied with the evolution of the market and with the government's involvement in the activity to support organic farming. In the opinion of some farmers who had initiatives in this field, organic agriculture became a non-efficient business in Romania, not because the outlet is not large enough, but rather because the government has not shown interest in this activity so far. On the other hand, this activity was given as an example of opportunity to conquer foreign markets. The lack of financial support from the state, in addition to the extreme weather phenomena in the last years, is the main factor which determines the producers to think about giving up their business. In many reports made by the producers or in the communications at the scientific events organized by them, it is mentioned that farmers are confronted with the problem of higher production costs as well as with the problem of product distribution.

The problem of the ratio of the production cost to the price of the product is not the only problem for organic farmers. The consumer is interested more in the price than in the quality of the product, and this constrains the development of the sector.

As always happens in such conflicts, on the side of the state institutions, the announcements are optimistic, satisfactory, and even praiseworthy. All governmental statements and the official documents show the favourable evolution of this sector and government's active implication in its development. For example, the documents elaborated by Romania's government in the last years regarding the strategy in this field in the future, comprise concrete references on the next steps and have clearly identified objectives. Thus, in the

National Export Strategy for the period 2005-2009 stated: the quantitative objective is to increase the areas under organic farming to 150,000 ha by 2007 and to create a domestic market of organic products; Romania has great opportunities for promoting and developing organic farming due to its large agricultural land area, i.e. 14.9 mil ha and its non-polluted soils (BioFach 2006). By the examination of the value chain and of the consumers' requirements on the world market, the following critical success factors could be identified: price, assortments, package, branding, and availability.

7.2 PDO, PGI and TSG in Romania

7.2.1 Implementation

In Romania, besides organic products, there are other four categories of products regulated by special laws: traditional, PDO, PGI and TSG. Among them, PDO, PGI and TSG products are under strict EU regulations, like EU quality schemes regulations. According to EU legislation, PDO, PGI and TSG products in Romania are regulated by the following acts:

- Order no. 690/2004 for the approval of the conditions and criteria for the certification of traditional products;
- Order no. 34/2008 for approving the sanitary, veterinary and food safety for the granting of exemptions for producers of food products with traditional characteristics from the requirements of Regulation 852/2004/CE on food hygiene and laying down the procedure for granting and registration exemptions for veterinary and food safety units in which the food products with traditional characteristics are produced;
- Decision no. 828/2007 establishing a system of protection of geographical indications and designations of origin for agricultural products and foodstuffs;
- Order no. 906/2007 approving the procedure for registration and documentation for obtaining the protection of geographical indications and designations of origin for an agricultural product or foodstuff, declaring opposition procedure at national and procedure for submission to the European Commission the application for registration of geographical indications and designations of origin for agricultural products and foodstuffs, in order to gain protection in the European Union, as well as specific rules about design and use of national logo;
- Order approving the Regulation on private bodies recognized inspection and certification of agricultural products or food and for the supervision of private inspection bodies and certification of agricultural products or foodstuffs which have gained the protection of geographical indications (PGI), designations of origin (PDO) and traditional specialties guaranteed (TSG).

National legislation on traditional products is applied by: MADR and the County Agricultural Departments. The role of the County Agricultural Departments is:

- Provides information useful to those who wish to register a product in the National Register of traditional products;
- Analyzes the request and specification;

- Checks the spot conformity of the data in the specification.

The role of the MADR is:

- Reconsiders the application and specification;
- Registers the products in the National Entry Register of Traditional Products;
- Issues document entitled "Certificate traditional product".

Traditional products can enter and apply EU quality scheme as follows:

- The combination of several manufacturers that make the same product in a defined geographical area;
- Industry associations can promote products that are enshrined in the national market (for example: the product of Sibiu, Bran, Bucovina, etc.);
- Businesses that specialize in a traditional product can receive exemptions concerning the association.

The application of European legislation on quality schemes is as follows:

- Preparation of specifications as required by law;
- Contacting and contracting an inspection and certification body;
- Establishment of an association to promote the product.

Main stages of product registrations in the Register of PDO, PGI and TSG are:

- Obtaining the document "Certificate of compliance in order to obtain protection";
- Submission the file to MADR;
- National objection period (60 days);
- Sending the necessary documentation to the European Commission;
- European opposition period (two months);
- Publication of product registration in the EU Official Journal.

The logo used for traditional products, PDO, PGI and TSG products are (Figure 6):

Figure 6 Logo for traditional, PDO, PGI and TSG products in Romania



7.2.2 PDO, PGI and TSG market potential in Romania

According to Order no. 690/2004 approving the "Rules on the conditions and criteria for certifying traditional products", during 2005-2013 (June 30, 2013) were officially registered at the Ministry of Agriculture and Rural Development 4,402 traditional products. In the Table 50 we present the evolution of the traditional products in Romania.

Table 50 Traditional products in Romania

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Number of products	280	695	774	325	450	279	1,050	438	111	4,402

Source: MADR

From the total of 4,402 traditional products certified and nationally registered, the highest number is owned by meat and meat products (1,541; 35%), followed by dairy products (in 1,535; 34.9%), bakery products (750; 17%). For the drinks category are recorded (285), vegetables and fruit (jams, jams) 193 and traditional fish products 11. The first three groups of products have about 87% from total Romanian traditional products.

The analysis on Romanian regions shows us that only in a few areas the certification activity was intense (Table 51). The majority of traditional products are concentrated in three Romanian regions: Centre, North-West and Sud-Muntenia (53.2% from total). The first five counties are located in these regions. The main characteristic of the first five counties is that they have a relief predominated by hills and mountains, places with many traditions which still exist; they were preserved in an authentic way and protected according to present legislation.

Table 51 Traditional products by regions (2005-2013, 30 June)

County (Region)	Number of products
Sibiu (Centre)	685
Argeş (Sud-Muntenia)	641
Maramureş (North-West)	395
Satu Mare (North-West)	319
Braşov (Centre)	300
Botoşani (North-East)	165

Source: MADR

A deeper analysis on Romanian regions and groups of products shows us the specialization and characteristics of producers and areas (Table 52).

Table 52 Traditional products in Romania, by groups and regions (2005-2013, 30 June)

Meat		Dairy		Bakery	
County/Region	Number	County/Region	Number	County/Region	Number
Sibiu/Centre	233	Argeş/Sud-M.	398	Sibiu/Centre	172
Braşov/Centre	139	Sibiu/Centre	245	Maramureş/NV	103
Argeş/Sud-M.	127	Braşov/Centre	134	Sălaj/NV	81
Maramureş/NV	119	Maramureş/NV	107	Alba/Centre	80
Botoşani/NE	107	Mureş/Centre	97	Covasna/Centre	55

Source: MADR

Except Argeş, which is part of Sud-Muntenia Region, the rest of the counties are in Centre, North-West and North-Est regions. Almost the same counties are present in all groups of

products, with special attention on Sibiu and Maramureș, areas with rich history and traditions, which have European recognition.

In the near future, there are a few measures and modifications which MADR wants to apply. Among them, we would like to underline the following:

- Redefining the traditional product;
- Introduction of control provisions that are not found in the current order 690/2004;
- Applying the logo on all products certified as traditional.

The redefinition of traditional products is necessary because of the huge number of products registered and the suspicion that exist regarding the conformity with national and European regulations. But, having in view that Romania has many traditional certify products, and probably will have after revaluation too, the premises are favorable for the conversion into PDO, PGI or TSG products. We can expect that in the next years this activity will increase and Romanian products will benefit of advantages of the EU quality schemes.

7.2.3 PGI case study for “Magiun Topoloveni”

In Romania, PDO, PGI and TSG products are almost absent, except PGI “Magiun Topoloveni” which is a natural plum jam. It is still the only PGI in Romania. There is no other Romanian product under EU quality schemes (PDO and TSG). As regards PDOs, presently, there are two applications submitted to the EU for the recognition of the Romanian PDOs namely, “Telemea de Ibănești” (cheese) and “Novac afumat din Țara Bârsei” (fish). All these Romanian particularities recommended us to present the history and characteristics of the only Romanian PGI, “Magiun Topoloveni”, which could be a good example for other Romanian producers (associations) and not only from Romania.

Topoloveni plum jam certification received Protected Geographical Indication (PGI) in Europe on April 8, 2011, the first award of its kind received by a Romanian traditional product. Topoloveni natural plum jam is produced according to a recipe from 1914. The product holds the title of Supplier of HM Royal House of Romania.

“Magiun Topoloveni”, plump jam, represents the Romanian first product certified by the EU and now (2013) the first to be accepted by the EU for promotion. In an interview with the company representatives many complains could be recorded regarding the abusive clauses in the contracts with the retails chains, such as for example Cora supermarkets. "If the stock of Topoloveni jam ends, then, the hypermarket can take other product and I have to pay for the product listing" said the company' representative, referring to the clause in the contract proposed by the hypermarket network. At the same time the representative of the company explained that his company's product is a traditional geographical indication, recorded at OSIM (National Mark Registration Office) and recognized in the EU, so it can not be replaced with any type of product. In the opinion of the owners of Topoloveni jam, traditional product should be untouchable. "You can not make its mark on traditional product" she said, adding that in some countries hypermarkets are obliged to purchase traditional products.

The representative of the inter-professional organization in the fruits and vegetable sector Romconserv, said that the producers of canned fruits and vegetables are required by some retailers to ensure continuity of stock in the shop for a year.

On the other hand, in Romania there are many manufacturers who agreed to sell their products under private brand retails to major retailers. "We are small producers who agreed to produce inferior quality merchandise under the mark/label of big retailers. Already the traditional brands are disappearing. "Future generations will not know how to speak Romanian," said the representative of Topoloveni jam producer referring to the name of foreign products. In response, supermarket representatives said that the clause referred the representative of "Topoloveni Magiun" is standard between a distributor and a manufacturer and the honoring of delivery orders by the producer, so the shelves will not be empty. "The reason for the failure to reach a trade agreement on Topoloveni jam is called the producer purchase price that would be transformed into a product too expensive for the hypermarket clients," added the hypermarket network representative. On the other side it should not be neglected that PGI products are meant for a selective client thus the hypermarket argument cannot be sustained and prevails consumers from having the chance to choose their preferred products even on a temporary basis.

Similar disagreements can be noticed also between Topoloveni jam manufacturer and other retail network. A discounter (Lidl), who has its own brand of "jam", which it seems does not meet technological standards available in Romania and European regulations, sells jam labelled as Topoloveni jam at dumping prices.

One of the benefits of registration of domestic products under EU quality schemes (PDO, PGI and TSG), among many other, is that the products can apply for EU funds. For instance, in our case, the European Commission approved Romania, in April 2013, a program to promote agricultural products in Switzerland, Norway and the Russian Federation. The name of the programme is "EUREKA: Descoperiți comorile Europei" (EUREKA: Discover the treasures of Europe) and its aim is the promotion of EU products in third markets. The total amount of the programme is 981.613 EUR and Romanian's contribution is 30%. The program is run by the manufacturer jam Topoloveni - SC Sonimpex Topoloveni Ltd, together with a consortium of producers of PDO-PGI in Greece.

7.3 Conclusions

Following the presentation of these statistical data, organic farming could be considered as a dynamic sector in Romania, with an increasing trend in recent years. However, Romania's RDP (2007-2013) did not include Measure 132 (participation of farmers in food quality schemes) and this, to a certain extent, gave less incentive for Romanian producers to apply for these kinds of schemes. In addition to this, the number of staff in the ministry or payment agency involved in this activity (providing advice on PDOs, PGIs and TGSs) is quite reduced, while farmers/associations or processor found it rather difficult, because of the administrative burden, to participate in quality schemes. Also the financial support, both for conversion to organic products and for quality schemes, is reduced or simply does not exist (for quality schemes).

There are two factors that are adjudged to be responsible for consumer demand to be concentrated in the most affluent countries of the world. The price premium of organic products restricts demand to countries where consumers have high purchasing power. This explains why most sales are in countries where there is a sizeable middle-class in the population. The second factor is education and more specifically awareness of organic products. As consumers become more educated and informed of food issues, they are more inclined to buy organic products whether it is because of factors like food safety, concern for the environment, or health reasons.

As production of organic crops increases across the globe, regional markets are also expected to develop in which organic farmers will produce organic products for consumers in their region. This is expected to stimulate sales of organic products in many developing countries, especially in countries like Brazil, China, India, and South Africa where economic development is increasing at a rapid rate and a more educated and affluent middle-class of consumers is developing. Also the trend of the cultivated area of organic products has slightly increased in Romania, as well as in other members of EU. In the same time, presently, the trade is made mainly within the EU with very little export in extra EU countries such as USA, but it has good perspectives, if we take in view that the effects of global crises are vanishing slowly.

The main conclusions resulted from this analysis, which can contribute, to the improvement of the competitiveness of the Romanian organic sector in the next period are, as follows: increase the number of operators in this sector, receiving financial support from the Romanian Government Programs; forming an association of small organic farmers so as to co-operate in the marketing of organic products; increase in the number of municipal and regional organizations directly involved in the implementation of the National Export Strategy in its initial stage; increase in the number of foreign direct investment projects and investments in related activities in the rural area; increase and diversification of the organic farm output; capacity improvement in terms of products and value added; development of services.

As regards to the EU quality schemes, after our analysis, we identified similitudes and differences with other EU countries. One might conclude that there are some similitudes between Romania and other Eastern European Countries in the sense that the level of participation in quality schemes and applications is much reduced. This is the result of the insufficient information provided by authorities or lack of willingness to commit towards activities which, at the first glance, do not permit financial security. In the same time, there is also a lack of experience, initiative and insufficient models to be replicated by other interested potential applicants for quality schemes.

In conclusion, the registration of other products under EU quality schemes has many advantages, like:

- Opportunities to access global markets;
- Quality schemes PGI, PDO, TSG provides producers with the appropriate tools to identify and promote those products whose characteristics are protected at national and European level;

- European consumer awareness about the quality of traditional products that are part of the national culture;
- Associations are the driving force to promote traditional products in Europe;
- Benefits to producers through an association of producers and/or processors exploit local heritage;
- Increase the market value of Romanian traditional products.

7.4 References

Voicilas, D.M. (2007): Organic farming. In: Ionel, I. (Ed.): Non-conventional farming economics. Romanian Academy, Institute of Agricultural Economics, Terra Nostra Publishing House, ISBN 973-8432-75-8, 65-125, Iasi, Romania.

Voicilas, D.M. (2007): Alternatives of rural development-organic farming. In: Multifunctional agriculture and rural development – Rural values preservation. Institute of Agricultural Economics-Beograd, ISBN 978-86-82121-48-0, Beograd/Beocin, Serbia.

WEB pages

Eco Ferma, <http://www.eco-ferma.ro/performantele-agriculturii-ecologice>

MADR database, www.madr.ro; reported data by inspection and certification bodies; County Agricultural Departments.

MADR: Direcția de Industrie Alimentară (Ministry of Agriculture, Forestry and Rural Development-Food Industry Department), “Produsul tradițional românesc în contextul schemelor de calitate Europene DOP, IGP, STG” (Romanian traditional product quality schemes in the context of European PDO, PGI, TSG), http://www.google.ro/url?url=http://www.madr.ro/docs/ind-alimentara/produse-traditionale/PREZENTARE_DGIA_INDAGRA1.ppt&rct=j&frm=1&q=&esrc=s&sa=U&ei=MSzXU_ioMYew0QWss4HgDQ&ved=0CBIQFjAA&usg=AFQjCNHOUyOm8hj2GM_ymAIBu5LVOg7TgA, Presentation during INDAGRA 2013, November 2nd, București, Romania.

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8 United Kingdom

Matthew Gorton

8.1 Organic-food market in United Kingdom

8.1.1 Implementation

There are separate rural development programmes for England, Northern Ireland, Scotland and Wales. The Rural Development Programme (RDP) for England (2006-13) supports organic farming through one component of the Environmental Stewardship (ES) agri-environment scheme, namely the organic entry level scheme (OELS). The OELS is available to registered organic farmers not receiving Organic Farming Scheme (OFS) aid. The OFS is now closed to new applicants and provided financial aid to farms converting from conventional to organic farming. OELS pays a supplement to certified organic farms. Specifically farmers receive £60 per hectare per year, £30 of which is intended to offset the cost of adopting environmental measures and the other half compensates for the cost of maintaining organic certification. Farmers converting to organic management may receive an additional 'conversion aid' grant of £175 per hectare per year for the first two years, or £600 per hectare per year for the first three years for 'top fruit' orchards (National Audit Office, 2010). Total expenditure on OELS for 2007-2013 was projected to be £176 million. The overall budget for England's RDP (2007-2013) was £3.9 billion of which £2.1 billion was allocated to Axis 2 measures.

An evaluation of the OELS points to rather a mixed picture – to encourage farmers to join, management options were designed to be easy to implement so that, according to an evaluation by the National Audit Office (2010, p. 7) '57 per cent of farmers chose some measures that involve managing features already in place on their farm. Many of the more challenging options are rarely implemented' so that overall the 'money paid to farmers for adopting management measures should have had more demonstrable environmental impact over and above the benefits secured from organic farming'.

There were no targets specific to organic farming in the RDP for England but a general objective of 50,000 farmers signing contracts under the ES, Environmental Sensitive Area and Countryside Stewardship Schemes. By December 2009, 58,447 contracts had been signed equivalent to 116% of the target achieved (Hyder Consulting, 2010). The main type of organic farming system is permanent and temporary pastures (DEFRA, 2012).

Under the Scotland Rural Development Programme (2007-2013), support has been available for both conversion to and the maintenance of organic farming (Scottish Government, 2012). This is based on five year contracts. For conversion, payments for arable land are £220 for years 1 and 2 and £60 in years 3, 4 and 5. For improved grassland, the respective figures are £105 per hectare in years 1 and 2 and £50 in the subsequent three years. For fruit and vegetables payments in years 1 and 2 are £300 per hectare and £60 in the subsequent three years. For unimproved grassland / rough grazing, payments are £5 per hectare in each year. For maintenance, payments per annum are: £60 per hectare for arable, and fruit and vegetable land; £50 per hectare for improved grassland, and £5 per hectare per year for

unimproved grassland/rough grazing. Between April 2008 and March 2011, approximately £7.8 million was spent on such organic farming payments (Scottish Government, 2011)

In 2011, the Scottish Government (2011) launched Organic Futures, an action plan for organic food and farming and funds an Organic Market Link Project, which collects and disseminates market intelligence to producers. The latter is managed by Scotland's Rural College (SRUC).

In Wales, the current agri-environmental programme is called Glastir and runs from 2012-2017. It replaces five separate schemes (Tir Gofal, Tir Cynnal, the Organic Farming Scheme, Tir Mynydd and the Catchment Sensitive Farming Scheme) (Welsh Assembly Government, 2011). The Organic Farming Scheme provided payments for both conversion and maintenance. For conversion (two years), the first hectare was eligible for an annual payment of £1000 and per hectare of additional land £150 for horticulture and arable crops, £150 for grasslands and £20 for extensive grassland (Welsh Assembly Government, 2008). For fully converted land, the first hectare of land entered into scheme was eligible for a payment of £500 p.a. with each additional hectare of land receiving £200 for horticulture, £60 arable, £40 grasslands and £10 extensive grasslands (Welsh Assembly Government, 2008). When Glastir was announced, details of organic payments were absent and following recommendations from the Glastir Independent Review Group, existing organic producers have been granted extensions to their existing agreements until the end of 2013. Expenditure on the Welsh Organic Farming Scheme between 2008 and 2012 amounted to between £4.2 and £7.2 million per annum (DEFRA, 2012).

The Welsh Assembly Government (WAG) partially funds the Organic Centre Wales based at the University of Aberystwyth. The Centre undertakes: market and policy studies, educational and dissemination activities, and produces technical guides for producers.

Northern Ireland's Rural Development Programme (2007-2013) includes an Organic Farming Scheme which supports farms in conversion. The programme outlines a target of 14,000 ha under organic management (Northern Ireland Statistics and Research Agency, 2010).

The two main industry bodies for organics in the United Kingdom (UK) are the Soil Association and the Organic Trade Board. The Soil Association (established 1946) is a membership based charity which promotes organic foods, commissions market studies and provides technical support and advice to farmers and other food chain businesses. A subsidiary, Soil Association Certification, certifies around 70-75% of organic products sold in the UK. The Organic Trade Board (created 2007) is a trade body, which seeks to lobby government on behalf of organic food and drink businesses and undertakes public relations and mass media campaigns.

8.1.2 Supply side

According to 2010 Agricultural Census data, 1.79% of agricultural holdings in the UK were engaged in organic farming with 2.4% of UAA devoted to certified organic production. These figures are similar to the respective means for the EU-27 (1.31% and 2.94%) (Eurostat, 2012). Since the financial crisis of 2008-9, organic production in terms of number of producers, area fully certified and in conversion has fallen. In 2005 there were approximately 4,300 organic

producers in the UK, with the number peaking at around 4,950 in 2009 with the most recent estimate, for 2012, being 4,435 (Soil Association, 2013)

Table 53 Land area under organic production (ha)

Specification	2008	2009	2010	2011	2012
<i>England</i>					
Fully converted	258,744	283,993	243,588	361,992	326,000
In conversion	89,037	91,074	67,588	29,769	25,000
<i>Scotland</i>					
Fully converted	193,133	225,137	209,256	176,000	165,000
In conversion	34,759	6,204	12,039	13,000	5,000
<i>Wales</i>					
Fully converted	65,127	75,143	88,566	115,000	120,000
In conversion	30,908	49,475	36,800	4,000	3,000
<i>Northern Ireland</i>					
Fully converted	7,299	10,141	10,269	11,000	8,000
In conversion	3,188	2,350	3,015	4,000	4,000
<i>UK total</i>					
Fully converted	524,303	594,413	619,268	667,371	619,000
In conversion	157,893	149,103	119,441	50,974	37,000
<i>Total</i>	682,196	743,516	738,709	718,345	656,000

Source: Soil Association reports.

Table 53 presents data on organic farmed areas (fully converted and in conversion) for the most recent years. The total organic land area has fallen from 743,516 ha in 2009 to 656,000 ha in 2012. This fall is accounted for by both a reduction in the amount of land in conversion and also some organic land reverting back to conventional production. The latter has been greatest in the South East, East Anglia, East Midlands and Yorkshire and Humberside regions where, overall, conventional production is most efficient. In East Anglia, the East Midlands and Yorkshire and Humberside organics accounted in 2012 for only 1.2% of the utilised agricultural area (UAA) compared to 9.7% in the South West of England (Soil Association, 2013). The price differential received by organic farmers has been eroded by rising international prices for conventionally produced crops and the reduction in domestic consumer demand for organics. The lack of an organic premium is noticeable in several sectors: for example, Moakes (2012) reports that in Wales 45% of fully organic finished lambs, 45% of store cattle and approximately 80% of stored lambs were sold as non-organic, in conventional supply chains. A series of recent wet and relatively cold summers also affected organic production disproportionately (Soil Association, 2012).

The widespread pessimism amongst much of the industry is reflected in surveys of producer intentions (Moakes, 2012). In 2012, 70% of Welsh organic farmers reported that they would

revert back to conventional production within the next five years compared with only 35% answering in such a manner in 2010. Moakes (2012) argues that this reflects the large proportion of organic farmers nearing or reaching the end of their current contract within the Organic Farming Scheme, Organic Farming and Tir Gofal schemes which have not applied to join the Glastir scheme.

8.1.3 Demand side

Table 54 details the total expenditure on organic products in the UK since 1995 and also reports the figures in per capita terms. Organic sales rose dramatically in the late 1990s – early 2000s, peaking in 2008, when sales reached £2.1 billion. The latter figure was equivalent to sales of £34.53 per capita per annum. Since 2008, sales have fallen dramatically, with the latest figures for 2012 indicating that the market has shrunk to

Table 54 UK Sales of Organic Products (1995-2012)

Year	Sales (£m)	£ per capita and per annum
1995	140	2.42
1996	200	3.44
1997	260	4.46
1998	390	6.68
1999	605	10.33
2000	802	13.64
2001	920	15.59
2002	1000	16.89
2003	1100	18.51
2004	1200	20.10
2005	1600	26.64
2006	1900	31.45
2007	2078	34.19
2008	2113	34.53
2009	1840	29.87
2010	1731	27.91
2011	1667	26.67
2012	1642	26.07

Source: Gorton, M. calculation based on Soil Association Reports and Office of National Statistics in England (ONS) data.

£1.64 billion (equivalent to £26.07 per capita per annum). The current slump in organics is in stark contrast to the early 2000s, when the organic sector was perceived as 'booming' (Rigby et al., 2001).

Table 55 outlines the distribution of organic sales by socio-economic class. Organic sales have always been biased to higher socio-economic classes (A and B) but the disparity has grown in recent years.

Table 55 Organic Sales by socio-economic class

Socio-economic class	% of population (2012)	Year			
		2009	2010	2011	2012
A, B	27	36	35.4	37	38.2
C1	29	31	31.7	34	32
C2, D, E	44	33	32.9	29	29.8

Source: own construction from Soil Association and ONS data.

In 2012, socio-economic classes A and B accounted for 27% of the UK population but 38.2% of all organic sales. In 2009 the comparable figure was 36%. In contrast for the lowest socio-economic classes, which account for 44% of the UK population, the share of total organic sales was just 29.8% in 2012, down from 33% in 2009. Reflecting these differences between classes, organic sales are above average in the more prosperous London, South East and East Anglia regions (Soil Association, 2013). For instance, in 2012, London (13.2% of the UK's population) accounted for 32% of total organic sales.

In the UK, the main motive for purchasing organic foods is the perceived health benefit from using fewer chemicals (Tregear et al., 1994; Hill and Lynchehaun, 2002; MINTEL, 2012). Secondary motives include perceptions that organic food is tastier, that it safeguards animal welfare, is less environmentally damaging and supports the local economy (Tregear et al., 1994; Padel and Foster, 2005). However, a significant proportion of consumers remain unconvinced, 34% of consumers believe that organic produce had no discernible advantages (MINTEL, 2012). Price remains a substantial barrier, 76% of consumers either agree or strongly agree with the statement that "organic food/drink is over-priced" (MINTEL, 2012).

Table 56 details the distribution of organic sales by product category. The three main product categories are, in descending order of importance: dairy; fruit, vegetables and salad; baby food. In 2011-12, all of the main organic product categories witnessed a fall in sales.

Table 56 Product Sales of UK Organic Market and Change in Sales Value

Product category	% of total sales 2011	% change in sales 2010-2011	% of total sales 2012	% change in sales 2011-2012
Dairy	29.2	-8.9	30.8	-4.8
Fruit, vegetables & salad	22.9	-5.1	22.8	-7.7
Baby food	13.3	6.6	13.9	-2.6
Beverages	6.4	-13.6	6.0	-6.5
Fresh meat	4.8	-5.7	5.0	-5.6
Fresh poultry	2.2	5.8	1.6	-29.9
Fresh fish	0.5	-24.6	0.6	1.4

Note: data for multiple retails only

Source: Soil Association annual reports.

Table 57 details the share of organic sales accounted for by different marketing channels.

Table 57 Share of UK Organic Sales by Marketing Channel (2004-2012), %

Channel	2004	2008	2009	2010	2011	2012
Multiple retailers	75.3	73.1	73.7	72.3	71.4	70.7
Box schemes/home delivery/mail order	2.6	8.1	8.4	9.0	10.0	10.6
Other independent retail	22.1	18.8	17.9	18.7	18.6	18.7

Source: own calculations from Soil Association reports.

Since the mid-2000s the share of organic sales accounted for by multiple retailers has fallen: from 75.3% in 2004 to 70.7% in 2012. The importance of organic varies strikingly between multiple retailers, largely based on their target market. For Ocado and Waitrose, which target more affluent consumers, organic accounts for 9% and 4.8% of food sales, respectively. In contrast, for supermarkets with a profile skewed to lower income groups, organic accounts for less than 1% of sales (Soil Association, 2013). The share of the organic market accounted for by independent retailers, including farm shops, has also fallen. Box schemes, home delivery and mail order have demonstrated some growth up from £155.8m in 2010 to £174.3m in 2012 and this is the only bright spot in terms of marketing channels for organic. However, the growth in box schemes has not offset the substantial decline in supermarket sales.

While demand for organic foods has declined in recent years the same cannot be said for all 'ethical labels' (Table 58). In contrast to organics fair-trade, free range and freedom foods have all registered healthy growth. The decline in organics cannot therefore be reduced to a general consumer unwillingness to pay any premium for welfare and ethical concerns. Free range and freedom foods appear to be better at communicating their benefits to consumers.

Table 58 UK Sales of ethical food and drink labels

Labels	2000	2010	2011	% change 2010-2011
Organic	605	1527	1500 ³²	-1.77
Fairtrade	33	1017	1262	24.09
Rainforest Alliance		1198	1346	12.35
Free range eggs	182	497	526	5.84
Free range poultry	44	252	266	5.56
Freedom foods		127	149	17.32
Sustainable fish		222	292	31.53

Source: Co-operative Group (2012, p. 4).

There are no reliable trade data on the organics sector, which hampers analysis. However, the UK has traditionally been a net importer of organic produce (Barrett et al., 2002). Recent debates about food miles and greater interest in local, seasonal produce have hurt demand for imported organics. It is noticeable that the one part of the organics sector that counters the downward trend are box schemes that typically focus on local, seasonal produce.

8.2 PDO, PGI and TSG products in United Kingdom

DEFRA (Department for Environment, Food and Rural Affairs) has a small team which provides advice on PDO, PGI and TSG applications. Since the mid-2000s, in response to an evaluation of the Regional Food Strategy (Gorton and Tregear, 2008), DEFRA has taken a greater interest in stimulating and helping applications for protected status. However, in England there are no dedicated grants for supporting applications or consortium membership. In particular, England's RDP (2006-2013) did not include Measure 132 (participation of farmers in food quality schemes). In contrast, Scotland's RDP (2007-2013) includes Measure 132, providing 50 per cent, up to a maximum of £150 (circa EUR173), of the joining fee or on-going membership subscription for eligible food quality assurance schemes. However, take up has been below expectation and the benefits negligible: 20 beneficiaries surveyed as part of the Mid-Term Evaluation indicated that they would have been members of the food quality assurance schemes regardless of receiving support under the measure (Rural Development Company Limited, 2010).

In Wales, Measure 132 was implemented as part of the Axis 2 Organic Farming Conversion Scheme (Measure 214), so there was no funding available directly under Measure 132 (Welsh Assembly Government, 2011). Measure 132 was not adopted in Northern Ireland (Northern Ireland Statistics and Research Agency, 2010).

In England there are regional food producer organisations (e.g. Taste of the West, Food Northwest, East Midlands Fine Foods). In the past they received funding through DEFRA and regional development agencies but are now largely self-supporting. The largest is Taste of the West, which reports nearly 1,000 food and drink manufacturers as members. These

³² Note the discrepancy between the value of organic sales between Soil Association and Co-operative data, although both report a downward trend.

producer organisations organise various shows, meet the buyer events and awards on behalf of fee-paying members.

8.2.1 Supply side

There are no data for PDO, PGI or TSG products collectively regarding sales or trade, which limits analysis.

Specific geographical indications vary enormously in terms of size of consortiums and value of output. The UK by July 2013 had 48 fully registered protected products (Table 59). By product category the most important are meat and meat products (16 products), dairy (14 products) and fish, molluscs and crustaceans (8 products). Annex 2 lists the 48 fully registered protected products in the UK.

Table 59 Number of fully registered reographical indications for UK by type of scheme and date of official registration

	PDO	PGI	TSG
Pre-1997	13	5	0
1997-1999	1	4	0
2000-2002	0	0	1
2003-2006	0	3	0
2006-2009	2	2	0
2010 - current	4	12	1
Total	20	26	2

Source: own analysis based on DOOR database.

Registration activity has fallen into two main time periods: an initial wave of mainly small-scale regional cheeses and alcoholic beverages and a more recent cluster, which is quite diverse, in the range of products, and includes some contentious cases such as Cornish Pasties and Melton Mowbray Pork Pies. The most important geographical indications by sales turnover are: Jersey Royal Potatoes, Scotch Beef, Scotch Lamb, Welsh Lamb, Welsh Beef and Scottish Farmed Salmon. In terms of consortium size, Jersey Royal Potatoes is one of the largest with 400 registered producers (Wilson et al., 2000). Historically there has been little interest in the EU schemes: 61% of English regional food producers surveyed in 2005 had not even heard of such designations (Gorton and Tregear, 2008). Early adopters tended to regard the schemes as a way of defending their products from cheaper 'copycat' versions' rather than as positive attribute that could be integrated into the marketing of the good (Ilbery and Kneafsey, 2000). One barrier to registration has been that regional food producers in the UK rarely co-operate with others in production and marketing, so that formation of consortiums to apply for protected status has proved difficult (Ilbery and Kneafsey, 2000).

While awareness has grown recently, for most of the UK food industry the EU protected designations are of peripheral interest.

8.2.2 Demand side

Groves (2005) undertook quantitative and qualitative research on consumer demand for local and regional foods in the UK. Most consumers regarded regional and local foods as 'a good thing', a finding echoed in other qualitative research (Tregear et al., 1998; Chambers et al., 2007). The main appeal to consumers of local and regional foods is their perceived freshness (Groves, 2005) with a requirement that such goods are authentic (Tregear et al., 1998). Consumers generally wish to support local farmers but price remains a barrier to purchase: 41% of those sampled by Groves (2005) believed that local / regional foods were generally too expensive.

Awareness of EU quality schemes remains low: a recent survey found that only 10% of consumers recollected seeing a Protected Geographical Indication logo (MINTEL, 2013).

8.3 Conclusions

In the 1990s / early 2000s organics were widely seen as offering a credible future for UK farmers, yielding higher margins for producers and avoiding a 'race to the bottom' with an appeal to consumers primarily based on health. Supermarkets widely stocked organic produce, which typically offered higher margins to them than conventional alternatives. However, since the financial crisis of 2008-9 both demand and supply have contracted in the UK and this has coincided with high profile studies that question claims that organics offer superior nutritional benefits to conventionally produced alternatives (Smith-Spangler et al., 2012). Such skepticism is widespread amongst consumers (MINTEL, 2012).

While in the 1990s and early 2000, organic produce was the main alternative to conventional production systems, the 'ethical marketplace' has become more congested with a multitude of other labels (e.g. rainforest certified, Freedom foods). These labels have not suffered the decline in demand witnessed by organics and appear to better communicate their attributes and benefits to consumers. In some regards, organics has ended up in a 'no man's land' of being higher priced but for too many consumers lacking clear benefits. A key test for the future of organics in the UK will be whether demand recovers as the macroeconomic situation improves.

On the producer side, rises in conventional food prices (esp. crops) and declining consumer demand has led to an erosion or reversal of higher margins for organic produce (Moakes, 2012). The land area devoted to organics (both in conversion and fully converted) has fallen especially in those regions where conventional production is most competitive. Uncertainty over the level and availability of support payments has also led to many farmers to question their future involvement in organics (Moakes, 2012).

Consumers generally regard local and regional foods as 'a good thing' but translating this into realised demand has proved more difficult in the UK. This reflects limits on consumer willingness to pay and the dominance of multiple retailers in food shopping. The EU protected name schemes remain of rather peripheral importance, reflecting a lack of consumer awareness and the structure of the UK food and drink industry being historically unsuited to the formation of applicant consortiums.

8.4 References

- Barrett, H.R., Browne, A.W., Harris, P.J.C. and Cadoret, K. (2002) 'Organic certification and the UK market: organic imports from developing countries', *Food Policy*, 27(4), pp. 301-318.
- Chambers, S., Lobb, A., Butler, L., Harvey, K. and Bruce Traill, W. (2007) 'Local, national and imported foods: A qualitative study', *Appetite*, 49(1), pp. 208-213.
- Co-operative Group (2012) *Ethical Consumer Markets Report 2012*. Manchester. [Online]. Available at: <http://www.co-operative.coop/PageFiles/416561607/Ethical-Consumer-Markets-Report-2012.pdf>.
- DEFRA (2012) *Agriculture in the United Kingdom 2012*. London. [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/208436/auk-2012-25jun13.pdf.
- Eurostat (2012) *Agriculture, Fishery and Forestry Statistics: Main results – 2010-11*. Luxembourg. [Online]. Available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-FK-12-001/EN/KS-FK-12-001-EN.PDF.
- Gorton, M. and Tregear, A. (2008) 'Government support to regional food producers: an assessment of England's Regional Food Strategy', *Environment and Planning C-Government and Policy*, pp. 1047-1060.
- Groves, A. (2005) *The Local and Regional Food Opportunity*. Watford. [Online]. Available at: <http://archive.defra.gov.uk/foodfarm/food/industry/regional/pdf/localregfoodopps.pdf>.
- Hill, H. and Lynchehaun, F. (2002) 'Organic milk: attitudes and consumption patterns', *British Food Journal*, 104(7), pp. 526-542.
- Hyder Consulting (2010) *Rural Development Programme for England (2007-2013) Mid-term Evaluation*. London. [Online]. Available at: http://ec.europa.eu/agriculture/rurdev/countries/uk/mte-rep-uk-england_en.pdf.
- Ilbery, B. and Kneafsey, M. (2000) 'Registering regional speciality food and drink products in the United Kingdom: the case of PDOs and PGIs', *Area*, 32(3), pp. 317-325.
- MINTEL (2012) *Organic Food and Drink*. London. [Online]. Available at: <http://oxygen.mintel.com/display/590386/>.
- MINTEL (2013) *Provenance in Food and Drink - UK* London. [Online]. Available at: <http://academic.mintel.com/display/657920/>.
- Moakes, S. (2012) *Welsh Organic Producer Survey 2012*. Aberystwyth. [Online]. Available at: http://www.organiccentrewales.org.uk/uploads/ocw_producer_survey_report_2012_final_executive_summary.pdf.
- National Audit Office (2010) *Defra's organic agri-environment scheme*. London. [Online]. Available at: <http://www.nao.org.uk/wp-content/uploads/2010/03/0910513.pdf>.
- Northern Ireland Statistics and Research Agency (2010) *Mid-term Evaluation of the Northern Ireland Rural Development Programme (NIRDP) 2007-2103*. Belfast. [Online]. Available

- at: http://ec.europa.eu/agriculture/rurdev/countries/uk/mte-rep-uk-northern-ireland_en.pdf.
- Padel, S. and Foster, C. (2005) 'Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food', *British Food Journal*, 107(8), pp. 606-625.
- Rigby, D., Young, T. and Burton, M. (2001) 'The development of and prospects for organic farming in the UK', *Food Policy*, 26(6), pp. 599-613.
- Rural Development Company Limited (2010) Mid Term Evaluation of Scotland Rural Development Programme - Report for the Scottish Government. Forfar. [Online]. Available at: <http://www.scotland.gov.uk/Resource/Doc/346698/0115341.pdf>.
- Scottish Government (2011) Organic Futures: An Action Plan for Organic Food and Farming in Scotland. Edinburgh. [Online]. Available at: <http://www.scotland.gov.uk/Resource/Doc/917/0115995.pdf>.
- Scottish Government (2012) Conversion to and Maintenance of Organic Farming. Available at: <http://www.scotland.gov.uk/Topics/farmingrural/SRDP/RuralPriorities/Options/conandmainoforganicfarmin> (Accessed: 16th July 2013).
- Smith-Spangler, C., Brandeau, M.L., Hunter, G.E., Bavinger, J.C., Pearson, M., Eschbach, P.J., Sundaram, V., Liu, H., Schirmer, P. and Stave, C. (2012) 'Are organic foods safer or healthier than conventional alternatives? A systematic review', *Annals of Internal Medicine*, 157(5), pp. 348-366.
- Soil Association (2012) Organic Market Report 2012. Bristol. [Online]. Available at: <http://www.soilassociation.org/LinkClick.aspx?fileticket=5QS24GNSZTA%3D&tabid=116>
- Soil Association (2013) Organic market report 2013. Bristol. [Online]. Available at: <http://www.soilassociation.org/LinkClick.aspx?fileticket=whbpEnZUd7A%3d&tabid=1984>.
- Tregear, A., Dent, J.B. and McGregor, M.J. (1994) 'The demand for organically grown produce', *British Food Journal*, 96(4), pp. 21-25.
- Tregear, A., Kuznesof, S. and Moxey, A. (1998) 'Policy initiatives for regional foods: some insights from consumer research', *Food Policy*, 23(5), pp. 383-394.
- Welsh Assembly Government (2008) 'Organic Farming Scheme: explanatory booklet'. Carmarthen: Welsh Assembly Government. Available at: <http://www.organiccentrewales.org.uk/uploads/ofsexplanbook.pdf>.
- Welsh Assembly Government (2011) The Rural Development Plan for Wales 2007 – 2013. Machynlleth. [Online]. Available at: <http://wales.gov.uk/docs/drah/publications/111221rdpmaintextpt1.pdf>.
- Wilson, N., Van Ittersum, K. and Fearn, A. (2000) 'Co-operation and co-ordination in the supply chain: a comparison between the Jersey Royal and the Opperdoezer Ronde potato', in Sylvander, B., Barjolle, D. and Arfini, F. (eds.) *The socioeconomics of origin labelled products in agri-food supply chains: spatial, institutional and coordination aspects*. Versailles: INRA, pp. 95-102.

9 Serbia

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9.1 Organic-food market in Serbia

9.1.1 Implementation

Organic production in Serbia began in the late 1970's. For the last ten years, production and processing of organic products became more popular and economically more important. In 2000, a law on organic production was announced. This law provided that authorized organizations, including state inspectors, could make inspections, and that the Ministry of Agriculture, Forestry and Water Management was the single authority that could issue certificates. New organic associations were created, such as farmers' associations and local and regional associations for rural development, regional cooperation, and promotion of organic production. Foreign buyers and investors organized local companies and farmers to work according to organic principles, and several companies started to work with organic production for export. The second law on organic production and organic products was announced in July 2006. The principles of organic production according to EU practice were completely adopted and implemented in the third law (Official Gazette of the Republic of Serbia No. 30/2010).

Ordinance on national label on organic products has introduced national organic label that every organic product that is properly certified in Serbia must have. The label is authorized and maintained by the Ministry of Agriculture. Beside this label, the Ministry of Agriculture introduced another label for products that are in the process of conversion from the conventional production into the organic production.

Figure 7 Label for the organic product in Serbia



Figure 8 Label for the products that are currently under the process of conversion in Serbia



9.1.2 Supply side

Some companies have built up their organic business from scratch while others have developed organic product lines in addition to their conventional products. The single biggest product group traded is fresh organic produce (fruit and vegetables). Food service industry is small for organic produce and usually focuses on regional markets.

Producers are promoting their bio products as a part of healthier lifestyle. By formation of habits for consumption of tasty, healthy and safe organic food, the step forward is made to transition to an organic lifestyle, the mode of lifestyle close to nature, which cherishes the special values, including the awareness and care of the health and improvement of the life quality. They are also trying to correlate both traditional and healthy food with organic products as well. Some of them produce organic ayvar or organic plump, while others also state that their products contain useful and necessary substances for health (eg. minerals and oligo-elements, dietetic fibers and Pro-Vitamin A, has low glycaemic potential etc.). Most of them simply perceive their products only as organic.

Direct selling on the farm is present in the region of Vojvodina where most of organic farms are located. Producers are willing to sell their products to consumers at their farm gate. The most famous example is of bio producer Mamuzic Josip from Subotica who governs an experimental bio farm in Subotica. He is selling his products at the farm gate, but also on a large market-place in Subotica („Suboticke pijace“, place no. 204 (TERRA'S - bio producer Mamuzic Josip Subotica). Along with Bio farm Mamuzic Ljutovo, an equally successful story could be found in the case of Family farm Malušćik, Kelebija. Only these organic producers are promoting their products by internet among other 224 registered farms in Serbia. It does not necessarily mean that other producers do not sell their products at farm gate, too. The list of certified organic producers (farms) in 2012 is available on the web site of the Ministry of Agriculture, Forestry and Water Management from Republic of Serbia.

Table 60 Producers of organic products

Name of producer	Main organic product
Agroekonomik, Belgrade	Frozen fruits, fruit juices, fruit juice concentrate
Atle, Belgrade	Frozen fruits
Biosil, Ugrinovci	Pasteurized vegetables
BMD, Arilje	Mushrooms
Radoslovi, Nis	Fruit jams
ML fruit, Valjevo	Frozen fruits
Sirogojno Company, Sirogojno	Frozen fruits
Donimpex, Velika Plana	Frozen fruits
Suncokret, Hajdukovo	Essential oils
Marni, Krusevac	Mushrooms
Zdravo ORGANIC, d.o.o., Selenca	Fruit jams, pasteurized vegetables
Foodland, Belgrade	Fruit jams, pasteurized vegetables and marmelades

Source: Ekonomski Fakultet Univerzitet u Beogradu (BEL).

Production of organic food is not only one motive perceived by food processing industry. They are trying to promote healthy and safe food, as well as to increase motivation of consumers and their education on the advantages of consuming such food (organic lifestyle). Important producers of organic products in Serbia are listed in the table below.

However, on the official Serbian Investment and Export Promotion Agency (SIEPA) homepage a list of important producers of organic products from Serbia, mostly concentrated in the fruit sector, can be found. Important actors were selected from the SIEPA list.

Table 61 The main organic processors

	Royal Eco Food	Mondi
Total turnover	n.a.	EUR 4.5 million
Share organic food turnover of total food turnover	n.a.	n.a.
Range width (no. of organic food products)	17	n.a.
3 most important organic product groups	Ayvar Tomato souce and Kechap Plum sauce	Frozen red organic fruit
When did the company start selling organics	-	-
Main challenges	The fulfillment of consumer requirements and increasing the quality beyond their expectations.	Export

Source: authors' presentation

Processors are recognized as the main pooling factor of organic production development in Serbia. They are mainly concentrated in sectors seen as having a comparative advantage for Serbia – fruit and vegetables, as well as wild collection.

Strong food brands in organic/health stores are equally foreign and domestic. Biotta and SoyaYoya are the most famous foreign brands, while some of the domestic well known brands are only nationally present (for example, Zdravo Selenca) and some of them are only regionally recognized and act as important exporters of organic food products (for example, Foodland). Other brands present at national level in organic food are BMD, Marni, Zaduggar, Suncokret, Zitothem and Status.

9.1.3 Demand side

The domestic market of organic products is still small and export driven (almost 90% of total organic production is exported, mainly wild collection and fruit). All studies have shown that the Serbian consumers aged from 25-40 years, well educated and with higher income are ready to buy organic products and to pay more for certified organic food. Consumers choose and pay higher prices for locally grown fruits, vegetables, meat and milk products, and products from specific regions, because they know that no chemicals are used.

Shopping behavior of consumers and their habits depend on numerous factors. In Serbia as the less developed country, these factors are primarily identified on a meta level (the degree of development of the country, presence of various sales chains, but also culture and

tradition of the country and consumers). The shape of shopping behavior varies from country to country, but also „levelling” of consumer characteristics is noticeable. Globalization affects presence of global brands, presence of global sales chains, as well as global campaigns (lesser and lesser adjusted to local consumer). All this forms a typical consumer in Serbia, as well as in other countries.

On a personal level, shopping habits are determined by demographic variables: age, education, income, gender, place of residence. All these categories also determine lifestyle of an individual, also the form of shopping behavior is an important characteristic of life style.

Where do consumers shop? Places visited daily, where consumers spend less than 1,000 RSD are bakeries, small shops with one cash register, green markets and kiosks. Consumers in Serbia go for small shopping to the nearest shops, buying everyday product categories, with a shorter shelf life. When the spent sum is bigger than 1,000 RSD, consumers usually go to hypermarkets or supermarkets. Sometimes, but more rarely, big shopping is done in small shops. Also expectedly, in non-urban municipalities, consumers visit supermarkets and bigger self-service less, especially for everyday purchase, since there exists a smaller number of them in these areas. Frequency of small and big shopping: small shopping is usually done 4-6 times a week, while big shopping is usually done once a week or 2-3 times a month.

When making a decision where to go for everyday shopping, vicinity of shop plays a crucial role. Then follow prices, and then quality of products. All other criteria are less important (politeness, variety of offer, security and sanitary conditions). In the fast way of living, when a modern man in Serbia is exposed to various responsibilities, it is natural that vicinity, rather than price, affects decision about shopping. Politeness of staff is more important for older consumers, while they value less: working hours, special offers and promotions. It seems that the biggest difference in shopping habits is conditioned by place of residence. All other demographic variables (gender, age) don't have the same influence as place of residence does. Consumers with higher income shop significantly less in small shops with one cash register, so we may assume that the richest people go for big shopping most, they do it more rarely, but they buy bigger quantities of products necessary for a household.

Consumers' confidence in quality and safety of products like meat, fruit, vegetables, bread and baked goods is far bigger in case of products sold in big chains and supermarkets, than in small shops that are not a part of any chain.

With the average income of less than USD 400 per month most Serbians are generally unwilling to pay the additional 30-40% premium for organic products. But all studies show that the Serbian consumers that are between 25 and 40 years old, urban and educated (and mostly female) are ready to buy organic products and to pay more for certified organic food. Some consumers are ready to pay higher prices for locally grown fruits, vegetables, meat and milk products and products from specific regions, because they know that less or no chemicals are used. Super markets, health food shops, and specialized open markets for organic products such as “My farm” in Novi Sad, ethnic and fancy restaurants are in constant demand for agriculture organic products.

Main distribution channels are e.g. farm gate sales, open-air markets, specialized grocery shops and natural product retailers. Also, small and medium companies are more important for processing and packaging rather than major food manufacturers.

Permanent green markets for fresh vegetables and fruit exist in Subotica and Novi Sad where organic products are also sold. The green market spaces for fresh organic products have more promotional than economic value. A house delivery system of organic products exists in Subotica. A small amount of processed products (flour, tea, oil, and cream) are sold in health food shops. Certified organic oils are also supplied to supermarkets.

Conventional retail channels such as supermarkets and hypermarkets as well as small stores do not focus on selling organic foods. Recently, some of the main retailers in Serbia, mainly in supermarket business, offer certain organic products in their stores. These products are usually positioned on the shelves next to the products from the same category (organic juice is next to the regular fruit juice). However, in some stores organic products are positioned in the healthy food section. They are combined with the other food items which are perceived as healthy.

It should be pointed out that there are not many organic products in conventional retail stores. Some retailers are willing to expand shelves' space for healthy food. This is a chance for organic food products. Conventional retail stores are the gate to mass market. However, it should put a lot of marketing efforts in order for organic food to become an important segment of retail sales.

Organic food shops are small stores located mainly near by so-called green markets, open market-places where fresh fruit and vegetables, as well as cheese and meat products are sold. In some cases, these stores are located at very exclusive places in large cities targeting high income and well educated population. These stores are not dedicated to the organic retail only. They are selling also other products considered as healthy food.

9.1.4 Trade

Certified organic products are exported primarily to the EU (especially Austria, Germany, Netherlands, Great Britain, Belgium, and Switzerland) and the USA. The exporters are cooling processing plants; companies involved in wild collection, and traders, and usually have long-term contracts with foreign buyers.

At the fair of fresh fruits and vegetables in Berlin this year 13 companies from Serbia presented their products, while at the fair in Nuremberg 7 companies presented their offer. Their activities are related to the production of organic products in Serbia. Foreign buyers were offered organically produced fruits and vegetables. The biggest export was achieved in the Russian Federation, in total worth \$ 8 million of contracted production and the negotiations for additional exports worth 5.9 million in 2010.

Serbia is exporting mainly raw organic products, while processed high value products are mainly consumed locally on the domestic market (supermarkets, specialized shops for organic food and direct sale).

9.2 PDO, PDI and TSG products in Serbia

9.2.1 Implementation

In line with European definition of regional food, labelling of traditional products to protect their geographical origin has also been regulated in Serbia (Zakon o oznakama geografskog porekla (eng. Law on geographic indications), Sluzbeni glasnik RS (eng. Official Gazette Republic of Serbia, 18/2010). Geographical indications prove that the product originates from precisely determined geographic territory. According to this law, geographical indications include name and label of origin. Name of origin assumes geographic location, region or country and claims that the product originates from this particular territory and its quality and specific characteristics also have resulted from this specific geographic territory, including its natural and human resources. Label of origin identifies geographic origin of particular goods which quality, reputation and other characteristics proving that these are related with the place of production/processing or preparation. It is allowed to use a well-known traditional or historical name as a label of origin.

The Ministry of Agriculture in Serbia has developed a database of agricultural-food products with potentials for protected designation of origin. The database forms a solid ground for provision of support to agricultural producers who wish to apply for protected names or labels of origin. The goal is to provide impetus for protected designation of origin especially with regards to the traditional products with strong export potentials. The list includes 49 products, with the highest shares of dairy products (21%) and fruits, vegetables and related products (19%). For example these are raspberry from Arilje, Cherry from Oblacinje, Pepper from Horgos, Sowercraft from Futog, prunes, cheese from Svrlijig, Homolje, Zlatibor, Sjenica, cream from Piro, Stara Planina, Kraljevo etc.

The above mentioned strategic commitments and institutions support the improvements of competitiveness of Serbian agriculture by increasing production of traditional food. However, increase of traditional food production is strongly linked with further promotion of traditional food products among the local consumers on Serbian market. Consumers' perception of traditional products and its labelling is therefore highly relevant for better understanding of their food preferences.

9.2.2 Supply side

In general, traditional food has been produced in households, on small farms as well as in micro and small enterprises owned by individual entrepreneurs. Therefore, it is typically characterised by small production capacities which leads to a number of problems regarding its distribution and commercialization. Such problems are mainly related with insufficient supply, inexistence of systems of quality control, standardization and food safety. While systems of quality control, standardization and food safety are not dependent on further centralization of production capacities, it is highly rational to centralize product commercialization, including certification, marketing and distribution.

To meet new market requirements, further cooperation among entrepreneurs will be needed. Such cooperation could be institutionalized through so called cooperatives for production and marketing of traditional food and PDO food. Cooperation will primarily be needed for various

marketing activities, including branding, promotion and distribution. Therefore, while place of production could be kept within small households in one local area or one region, the supply and further distribution towards end-users could however be centralized for the whole geographic area.

However, individual entrepreneurs in less developed rural area in Serbia might face a substantial lack in financial and human resources for development of production and marketing of traditional food and PDO food. In consequence, it is crucial to support them through adequate public policy measures that would contribute to further development of particular regions and local rural communities. Such measures should include the following:

1. Measures for the improvement of standards of production, including provision of education and training of individual producers but also provision of financial funds for further development of production methods, procedures and human capital.
2. Education of individual entrepreneurs on implementation of marketing activities and provision of initial support in branding of traditional food with protected designation of origin certificates.
3. Establishment of institutions for quality standards, food safety control and certification as well as provision of support for its functioning in the long-run.
4. Provision of initial support in product certification, due to the fact that this is quite a new concept with which the local producers don't have enough experience. Such a support could efficiently be provided by the Network for Rural Development, local activists groups or other organizations whose operations are connected with promotion of local economic development in rural areas.
5. Education of final consumers by initiating an advertising campaign to emphasise benefits of consumption of traditional food with geographic indications, but also through further cooperation with consumers' protection organizations which could also contribute to spread information and increase the knowledge about these products among consumers.

9.2.3 Demand side

Traditional food in Serbia is generally linked with specific geographic location and use of the same production methods and/or recipes throughout various generations. Due to these main characteristics, traditional food makes a food product category with strong potential for application of geographical indications. Improvement of commercialization and marketing of these products is however strongly dependent on further standardization of quality and production in accordance with high hygienic standards.

Traditional food is usually sold at green markets, specialized outlets or large retail stores (supermarkets and hypermarkets). Current legislation referring to geographical indications of agricultural and food products imposes strict control over quality standards and truthfulness of claims provided in product specifications. Unfortunately, an accredited body for the implementation of these procedures and issuing official certificates has not been established yet. By now, the quality control only refers to fulfilment of hygienic standards and food safety. Generally speaking, lower level of trust in the system of control over products sold on green

markets may fuel further development of longer distribution chains which includes retail outlets. On the other hand, imposing a new system of quality control may contribute to higher trust into quality of products sold on green markets.

According to the attitude of consumers in Serbia, there is a relatively positive climate for production and commercialization of traditional food products and PDO food. The research showed that the image of locally produced food and home-made food is positive in Serbia.

Further education of consumers regarding benefits of traditional food and PDO food is highly needed especially due to the fact that the price of those products is typically higher than their conventional counterparts. Therefore, end-users should be well informed about the added value of traditional food with geographic indications in order to get ready to pay premium prices. Centralization of marketing activities should therefore also include education of final consumers.

9.2.4 Trade

Traditional food markets are still in their infancy stage in Serbia. Therefore, we could not report about intra- and extra-EU sales of these products. As far as the national market is concerned, these products belong to the low marketed food, mainly produced in rural households and sold at green markets. Only a few products are processed and sold in supermarkets and hypermarkets in Serbia (e.g. Granma secret Ajvar - Food land, Bernet – produced by rural households in Sremski Karlovci etc.).

9.2.5 PDO case study for “Sjenicki sir”

The municipality of Sjenica is located in western Serbia, bordering with Montenegro. The municipality of Sjenica spreads over 1,059 km², with agricultural fields accounting for 75.8% of its territory. The total population of Sjenica is 27,735 (Municipalities and Regions in Serbia, Statistical Office of Serbia, 2011). With only 26 inhabitants per square kilometer, the municipality of Sjenica is one of the most dispersed areas in Serbia. Adding to this the fact that local road network is rather weak and that the whole area is covered with snow for almost seven months a year, it is quite obvious that both inter-municipal and external communications are highly limited. The natural setting of Sjenica provides excellent conditions for the production of milk, dairy and meat products. In addition to one big company (Sjenicanka) and several small dairy plants, dairy products are mostly produced at home, i.e. by small farmers. Sjenicanka used to be a highly successful state owned company in the 70s and 80s in the last century, and one of the most important employers of the local population. Today, while it still exists, it has rather limited capacities. In recent years several small local dairy plants have started to appear with the support of foreign donations (eg. EU, UN and USAID funds). Still, the highest quantities of dairy products are home-produced by the local farmers. The most famous product is Sjenicki sir (engl. Sjenica white cheese), hard salty white cheese made of sheep or cow milk Sjenicki sir is a well recognized and accepted dairy product on the Serbian market. It has been sold on green markets in every big city and the local population is used to obtain it from the local farmers. Moreover, the product has been well known in the nearby places in Montenegro, Bosnia and Herzegovina, and Kosovo.

However, the trade of this product outside Serbia over the last few years has been diminishing. The main reasons are new hygienic and food safety standards, which the local producers are not able to meet, and the need for provision of specific documentation when exporting the goods. At present, the product is mostly exported to Bosnia and Herzegovina. The weak local infrastructure still makes the biggest constraint to high scale production and trade of Sjenicki sir. The local homes are often not connected to the electricity network. Moreover, some of those still do not have running water. The road network is rather weak, and the harsh natural conditions make many of the local homes inaccessible for the most part of the year. Therefore, an organized collection of the local produce is quite complicated. On the other hand, individual farmers can hardly place their products anywhere else but the local green markets and those can not absorb the quantities they are producing. In consequence, big quantities of Sjenicki sir are leftover each year, which further contributes to the devastation of local families mostly already living under poverty level. As the local population is highly dependent on the production and trade of Sjenicki sir, with the help of international organizations the local government has initiated a number of projects to provide technical assistance for the improvement of infrastructure as well as distribution and marketing of Sjenicki sir. Finally, at the end of 2012 Sjenicki sir was issued a PDO certificate. With an added value and proofs of provision of various standards the product should be much easier to sell through big food chains on both local and foreign markets. Further exports of Sjenicki sir are dependent on provision of bigger quantities. Therefore, there has been an urgent need for better organization of small farmers` production, particularly through the development of local cooperatives for certification of quality and safety standards and further distribution and marketing of Sjenicki sir.

9.3 Conclusions

In the early development of organic production in Serbia the main actors were NGOs, companies, traders and investors that made organic production to take off and to increase. The negative consequence of not enough government involvement is that the organic sector is not properly organized, an organic market still does not exist and the level of knowledge on organic production is still very limited.

At the domestic market the organic production and consumption is promoted as a part of healthier lifestyle, but also correlated with traditional food. Consumers are generally unwilling to pay the additional 30-40% price premium for organic products (average income of less than USD 400 per month in 2012).

The development of the domestic market is going slowly due to the lack of organizational structure in the production, promotion and exposure in media. Other obstacles are the absence of standards and successful certification organizations, lack of advisory services, missing statistical data base (lack of transparency), lack of export orientated production, high certification costs, and high price premiums for organic products.

This review of the organic agricultural sector in Serbia identifies some emerging trends and shows that many actors in the industry are trying hard to advance on the road defined in the National Action Plan for the Development of Organic Farming in Serbia.

A number of major hurdles and problems still lay ahead and need to be overcome. One major impediment is capital constraint at all levels of the value chain, another poor organization of actors along this chain, and third low efficiency of production, processing, and marketing.

With firm engagements, following EU regulations and National Rural Development Plan, Serbia may hope to speedily and efficiently become a major actor on the European Union's organic markets.

9.4 References

Republic of Serbia Ministry of Agriculture, Forestry and Water Management database
(http://dnrl.minpolj.gov.rs/novo20%organska/Spisak_proizvodjaca_organskih_proizvoda.pdf)

Official Gazette of the Republic of Serbia, No. 18/2010

Official Gazette of the Republic of Serbia No. 30/2010, Law on Organic Production

Serbia Investment and Export Promotion Agency (SIEPA)

10 Discussions

In this report a special attention was given to the markets for organic, PDO, PGI and TSG products. The organic production and the EU quality schemes have been investigated more detailed in the case studies for EU-27 member states like the Czech Republic, Germany, Italy, the Netherlands, Romania, and the UK, and for Serbia as a non EU member state, which is currently a candidate for EU membership. The case studies presented show us the particularities of the markets and make us understand their future potential.

In most of the EU member states, there is still little quantitative information available with respect to the sales and trade of PDO, PGI and TSG products. More information is available about the organic sector, which has a longer history. While the EU has sought to promote PDO, PGI, TSG designation, consumer knowledge on the quality schemes is still, in general, low. That is why, the member states should improve the distribution channels of information and create a common database, based on data collections from the national specialized bodies. Common popular campaigns must be initiated to promote the benefits of consumption of this kind of products. In the same time, a special challenge could be to convince the producers to practice a new way of agriculture and the processors to respect the quality schemes. Of course, the most important meeting point for all actors remains the market and the price plays a crucial role. Maybe cheaper prices for these products will make them more popular and accessible for a large group of consumers.

Regarding organic production, one of the main issues is still the unclear definition. A strict delimitation of the organic products from other products could help the consumers to choose the best option for their lifestyle. The consumers must be convinced that the consumption of this kind of products will improve the quality of their life. It is still a big challenge. How to convince them having in mind the specific traditions, consumption behaviour, mentalities, cultural differences and purchasing power level, which is also different between countries, is hard to answer.

In regards to EU quality schemes, there is still limited growth potential, because the production practice is not very common and easy for producers to follow. But, the idea to have a regulated market with products strict defined and specialized is ambitious and useful for the common EU market and policy.

In the same time, we must have to keep in mind the other markets in the world. The competition on the global market has been quite tough in the recent years. Especially the developing countries, but not only them, require special attention. Their domestic markets can be great opportunities for EU members to extend their business but, in the same time they could be strong competitors. How to protect the EU market from foreign products and how to increase EU's share on other global food markets is quite hard to predict at this time.

There is increased attention for sustainability, both by consumers but also by retailers and other market channel actors. Some consumers associate organic production and products with sustainable food. However, sustainability exceeds the legal requirements for the organic production and the sector should address a number of additional elements in order to become truly sustainable (economic, ecologic and social), e.g. use of energy, food waste, fair

trade, bio-degradable packaging, and food miles. These issues extend beyond the production and should be taken into account throughout the organic value chain.

The organic sector, but also PDO, PGI and TSG products must be intensively monitored. The sector puts increasing effort in quality controls to safeguard the sector against food scares that could affect the image of the whole sector. In the future, the sector will also be required to have identifiable indicators of its performance on different elements of sustainability (e.g. animal-friendliness; clean water; nutrient balance; energy-friendly; biodiversity; social aspects). These indicators should be made transparent for organic producers as well as processors and consumers.

Summing up, when we discuss about organic, PDO, PGI and TSG products we must always have in mind: the market, products, prices, market channels, consumers, sustainability, monitoring, and international developments.

Among the issues for further research is also to combine agricultural and food-manufacturing trade data analysis with the quality schemes to create a specific quality/innovation indicator. Among other possible explanatory variables of innovation and quality determinants could be variables based on the relative research and development expenditures, and the patenting activity in the agricultural and the food manufacturing sector.

In the same time, the study can be developed with additional information provided by a complementary qualitative analysis, possibly based on semi-structured interviews with main participants of the chain: farmers and farmers association, government (certification and quality control), retail traders and other possible consumers (bio-hotels etc.).

11 Final conclusions and remarks

In this chapter some remarks and conclusions are drawn from the analysis of the seven countries included in this study.

There are similarities and differences among EU member states. The differences appear especially pronounced between EU-15 (Old Member States) and EU-12 (New Member States), regarding the level of development of the organic, PDO, PGI and TSG products' market. All these products are considered relatively new on the market, which is a niche market, but a dynamic one, with in the case of organic a history of about 30 years in the majority of the countries analysed.

Regarding organic products, the converted cultivated areas have extended rapidly in the past years, but at present, the trend has started to stagnate, except UK, which recorded decreasing trend in the period 2010-2012. Organic production increased rapidly in the past, in the majority of the states (except UK) but, in recent years, the global crisis hindered the growth of production, especially in the New Member States, due to market demand contraction. The demand was directly affected due to the lower level of consumer incomes. Among the analysed countries, Germany ranks the first in terms of market demand in the EU for organic products and second in the world after the USA.

Consumer associations have been playing an increasing role in the aim to improve consumer's protection and quality control. Furthermore, different websites have become crucial channels for marketing and promotion activities and thus are important for promoting non-conventional products. They can play a decisive role in the near future as the role of the internet is increasing. In some countries like the UK, a different perception can be observed among consumers. Organic was widely seen as offering a credible food alternative in the '90s and beginning of 2000s. Since the global crisis started, skepticism has spread amongst consumers and coincided with high profile studies that question the often acclaimed superior nutritional benefits of organic products in comparison to conventional produce. For many consumers there is a lack of clear benefits and evidences in this regard. From this point of view, the perception is rather pessimistic.

The trade with organic products is mainly intra-EU oriented, with minor exports to the USA and the countries of the BRICS group. Taking into consideration that BRICS countries have a quite high potential for economic growth, one might be expected that the export of such products to these countries will increase.

Concerning PDO, PGI and TSG products, there are some similarities between Eastern European Countries, in the sense that the participation in quality schemes and applications is rather small (with Romania having only one product with PGIs and two PDOs being in the evaluation process, or Czech Republic, which has five PGIs and one TSGs products registered). In the Old Member States the registration situation is much better, but not always well developed, in all cases: for instance, Germany has only one TSG product and Italy two.

For the New Member States, the main reason for which the level of market development is low is the lack of experience, tradition, and insufficient models to be replicated by other interested potential applicants for quality schemes (Romania or Czech Republic). However,

the most active players in the field are Old Member States, based on their previous experience and also on the adoption of Measure 132 (participation of farmers in food quality schemes) in their Rural Development Programs (2007-2013). Among the analysed countries of the EU-15, Italy ranks 2nd and Germany ranks 6th after Spain, Italy, France, Portugal and Greece. One might say that that the market development is quite slow in the EU-12 and stagnant in the EU-15.

Finally, we would like to highlight the barriers that hinder the development of organic and PDO/PGI markets. First, the high investment costs for conversion (in case of organic products) and for legal registration procedures (in case of GI products). The financial support both for conversion to organic products and for quality schemes registration is reduced or it does not exist (e.g. for quality schemes in Romania). The time-consuming and complex system of application as well as low confidence in and recognition of the labels by the potential buyers constrain the process. At the same time, we can observe low interest from large-scale enterprises and producer associations which represent these large enterprises, like in Romania, to invest in this field, because they consider the involvement too complicated and costly.

Second barrier is the weak government participation. In some countries like Romania or Serbia the organic sector and the second quality schemes are not well organized. An organic market still does not exist in Serbia and the level of knowledge on organic production is still very limited. In countries like Romania, the market of products from the second quality schemes does not exist and has little chances to develop in the near future, due to the fact that the investments in this domain is less attractive for farmers and the EU funds are oriented towards other agricultural and rural priorities. The capacity to absorb EU funds is small. In these countries, the number of staff in the ministry or payment agency involved in this activity (providing advice on PDOs, PGIs and TGSs) is quite reduced, while farmers/associations or processors found it rather difficult to participate in quality schemes due to the administrative burden. In addition, an important obstacle is the absence of successful certification organizations and lack of advisory service.

Another barrier for development of the markets is the lower level of incomes in the EU-12 countries and the premium price for organic and GI products. It restricts demand in countries where consumers do not have high purchasing power. Consumers are generally unwilling to pay the additional price premium. This explains why most sales take place in countries where there is a sizeable middle-class in the population. At the same time, the education level can influence the market development. As consumers become more educated and informed on food issues, they are more inclined to buy organic products, PDO, PGI or TSG products whether it is because of factors like food safety, concern for the environment, or health reasons. Consumers generally regard local and regional foods as 'a good thing', but translating this into real demand has proved to be difficult. This reflects limits on consumers' willingness to pay the price premium. The EU protected name schemes remain of rather low importance, reflecting a lack of consumer awareness and, for some countries like UK, the structure of the food and drink industry being historically unsuited to the formation of applicant consortiums.

One might conclude that measures to improve the competitiveness of the production and processing of organic, PDO, PGI and TSG products, in the next period should focus on: increasing of the number of operators in this sector, which receive financial support from the national governments and EU; fostering the formation accociations of small farmers and their cooperation in the marketing of the organic and GI products; increasing the number of municipal and regional organizations directly involved in the implementation of the national RDP dedicated measures; increasing the number of foreign direct investment projects and investments in related activities in the rural area; increasing and diversifying the farm output; improving the capacity in terms of products and value added; the developing more services.

References

- Act. No. 242/2000 Coll., on organic farming and amendments to Act. No. 368/1992 Coll., on administrative fees, as amended
- AMI (2012): AMI Markt Studie – Strukturdaten im ökologischer Landbau in Deutschland 2011 (Structure of organic food production in Germany 2011), http://www.ami-informiert.de/fileadmin/redaktion/bio_daten/strukturdaten/Strukturdaten_und_Verkaufserloese_2011_PDF.pdf
- Benner, E.; Profeta, A.; Wirsig, A. (2008): Die EU-Übergangsregelung zum Herkunftsschutz bei Agrarprodukten und Lebensmitteln aus dem Blickwinkel der Transaktions- und der Informationsökonomie. Vortrag anlässlich der 48. Jahrestagung der GEWISOLA, Bonn., <http://ageconsearch.umn.edu/bitstream/52644/2/benner.pdf>
- Biofach (2013) (joint with SINAB): Il mercato internazionale e nazionale dei prodotti biologici e le opportunità per le imprese italiane sul mercato Tedesco
- Bioinstitut (2012): Yearbook 2011 Organic Agriculture in the Czech Republic. Ministry of Agriculture CR, Prague. 90 p. ISBN 978-80-7434-080-2
- Bionext (2011): Biotrends 2011. Trends en ontwikkelingen in de biologische sector. KSB Repo, Leeuwarden
- Bionext (2012): Bionext Exporttrend Biologisch 2012, Bionext, Zelst
- BLE (2012): Bundesanstalt für Landwirtschaft und Ernährung, Strukturdaten zum ökologischen Landbau für das Jahr 2011. Bonn. Online unter: http://www.ble.de/SharedDocs/Downloads/04_Programme/01_Oekolandbau/ZahlenOekolandbau2011.html, zuletzt 15.7.13
- BMELV (2013): Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, Ökologischer Landbau in Deutschland, <http://www.bmelv.de/SharedDocs/Standardartikel/Landwirtschaft/Oekolandbau/OekologischerLandbauDeutschland.html>
- BÖLW (2013): Bund Ökologischer Lebensmittelwirtschaft, Zahlen, Daten, Fakten – Die Bio-Branche 2013, http://www.boelw.de/uploads/media/pdf/Dokumentation/Zahlen__Daten__Fakten/ZDF_2013_Endversion_01.pdf, in German
- Brändli, C. (2005): Pricing of bio-products in food-retail sector – an international comparison (Preisgestaltung von Bioprodukten im Lebensmittelhandel – Ein internationaler Vergleich), <http://www.sustainability.wi.tum.de/fileadmin/w00bge/www/Artikel/db5.pdf>
- Buxel, H.; Schulz, S. (2010): Akzeptanz und Nutzung von Güte- und Qualitätssiegeln auf Lebensmitteln. Ergebnisse einer empirischen Untersuchung. Münster
- CBE (2013) Cluster-Bayern-Ernährung : EU Herkunftsschutz für bayerische Spezialitäten. Cluster-Ernährung Bayern, Kulmbach, <http://www.cluster-bayern-ernaehrung.de/regionalitaet/herkunftsschutz/>

- Demeter (2013): Demeter-International E.V Production Standards For The Use Of Demeter, Biodynamic And Related Trademarks, June 2013, <http://www.demeter.net/sites/default/files/DI%20production%20stds%20Demeter%20Biodynamic%2013-e.pdf>
- DPMA (2013): Deutsches Patent- und Markenamt: Merkblatt über den Schutz von geografischen Angaben und Ursprungsbezeichnungen für Agrarerzeugnisse und Lebensmittel gemäß der Verordnung (EU) Nr. 1151/2012 (vormals Verordnung (EG) Nr. 510/2006), Deutsches Patent- und Markenamt, München, <http://www.dpma.de/docs/service/formulare/marke/w7729.pdf>
- Eco Ferma, <http://www.eco-ferma.ro/performantele-agriculturii-ecologice>
- Eko-monitor (2006): Cijfers en Trends. Jaarrapport 2006. Biologica, Utrecht
- Federation of the Food and Drink Industries of the Czech Republic (2010): Analýza trhu s biopotravinami v České republice (Analysis of organic food market in Czech Republic). [on-line] [cit. 2013-07-06] URL: < <http://www.bioinstitut.cz/argumenty.html> >
- Hoogerduijn, E. and Pool, M. (2008): Aardappel met Smaak? Verkenning naar de markt voor een biologische aardappel welke zich onderscheidt op smaak. Praktijkonderzoek Plant en Omgeving B.V. Sector AGV, Lelystad
- Institute of Agricultural and Economics Information (IAEI) (2013, 2012): Statistická šetření ekologického zemědělství – Zpráva o trhu s biopotravinami v ČR (Statistical survey of organic farming – Report of Czech bioproducts market). [on-line] [cit. 2013-07-04] URL: < <http://eagri.cz/public/web/mze/zemedelstvi/ekologicke-zemedelstvi/biopotravinu/> >
- Ismea (2012): 10° rapporto 2012 Qualivita sulle produzioni italiane DOP IGP STG
- Istat (2013): Report: I prodotti agroalimentari di qualità DOP, IGP e STG
- Janssen, M.; Zander, K. und Hamm, U. (2012): Präferenzen und Zahlungsbereitschaft deutscher Verbraucher bei Öko-Wein. Universität Kassel, Fachbereich Ökologische Agrarwissenschaften, D-Witzenhausen, Fachgebiet Agrar- und Lebensmittelmarketing
- Ježek, J. (Ing.), Vostřel, J. (Ing.); Krofta, K. (CSc. Ing.); Klapal, I. (Ph.D., Ing.) (2013): Milestone in Czech hop growing: harvest of the first Czech organic hops. Hop Research Institute, Žatec
- Köpke, U., Küpper, P.M. (2013): Marktanteile im Segment Bio-Lebensmittel: Folgen und Folgerungen, Studie, Institut für organischen Landbau Universität Bonn, http://www.iol.uni-bonn.de/pdf/IOL-Studie_Marktanteile_%20im_Segment_Bio-Lebensmittel.pdf
- Landesamt für Natur, Umwelt und Verbraucherschutz Nordrhein-Westfalen (LANUV-NRW) (2012): Fördermöglichkeit des Landes NRW, Recklinghausen, <http://www.lanuv.nrw.de/agrar/regionalvermarktung/lebensmittelspezialitaeten/foerderung.htm>
- Lippert, C.; Thiedig, F. (2001): Staatliche Förderung geographischer Herkunftsangaben für Lebensmittel und Agrarprodukte – Wohlfahrtstheoretische Analyse und Implikationen für WTO-Verhandlungen. In: Brockmeier, M.; Isermeyer, F.; Cramon-Taubadel (Hrsg.)

- (2002): Liberalisierung des Weltagrarrhandels – Strategien und Konsequenzen. Schriften der Gesellschaft für Wirtschafts- und Sozialwissenschaften des Landbaues e.V. Münster-Hiltrup: nnb, (37), S.149-158
- MADR database, www.madr.ro; reported data by inspection and certification bodies; County Agricultural Departments
- Ministry of Agriculture CR (MAg CR) (2010): Action Plan for Organic Farming 2011-2015. Ministry of Agriculture CR, Prague. 90 p. ISBN 978-80-7434-007-9
- Monitor Duurzaam Voedsel (2009-2012): Ministerie van Economische Zaken, Den Haag
- Parodi, G. (2013): alla ricerca della sostenibilità: lo sviluppo dell'agricoltura dall'unità d'Italia alla Green Economy. PhD Thesis, Università di Bologna
- Raiser, G. (2012): Regional schlägt Öko. In: ACKERplus (04/12), S.11-12, http://www.mg-niedersachsen.de/fileadmin/user_upload/PDF-Dokumente/BeratenFoerdern/2012_Heidekartoffel_Detrmering.pdf
- Republic of Serbia Ministry of Agriculture, Forestry and Water Management database - http://dnrl.minpolj.gov.rs/novo20%organska/Spisak_proizvodjaca_organskih_proizvoda.pdf
- Official Gazette of the Republic of Serbia, 18/2010
- Official Gazette of the Republic of Serbia No. 30/2010, Law on Organic Production
- Rete Rurale nazionale (2012): Bioreport 2012: L'agricoltura Biologica in Italia.
- Serbia Investment and Export Promotion Agency (SIEPA)
- SINAB (2012): Bio in cifre 2012: i dati del biologico italiano. Prime anticipazioni del SINAB
- STEN/MARK (2010): Povědomí a nákupní chování spotřebitelů v oblasti biopotravin (Awareness and purchase behavior in organic products issue). [on-line] [cit. 2013-07-04] URL: <http://www.bio-info.cz/bio-akademie/povedomi-a-nakupni-chovani-spotrebitelu-v-oblasti> >
- Tanguy, C.; Renault C.; Renault, S; Romieu, V.(2012): Value of production of agricultural products and foodstuffs, wines, aromatised wines and spirits protected by a geographical indication (GI) - Final report,http://ec.europa.eu/agriculture/external-studies/2012/value-gi/final-report_en.pdf
- Tress, F. (2012): Schwäbische Spätzle und Knöpfle als Herkunftsbezeichnung durch EU Kommission geschützt. PM, <http://www.tress.de/presseleser/items/schwaebische-spaetzle-und-knoepfle-als-herkunftsbezeichnung-durch-eu-kommission-geschuetzt.html>
- Trofimtseva, O. (2012): Schutz von geografischen Angaben und Ursprungsbezeichnungen für Agrarerzeugnisse und Lebensmittel in Deutschland: ein offenes Feld.,<http://www.idf-germany.com/idf-dienstleistungen-aufgaben/idf-normung-harmonisierung/news-detail/datum////schutz-von-geografischen-angaben-und-ursprungsbezeichnungen-fuer-agrarerzeugnisse-und-lebensmittel-i/>

- Václavík, T., Čítková, Z., Bystřická, Š. (2008): Český trh s biopotravinami 2008 (Czech Trade of Organic Food 2008). Green Marketing, Moravské Knínice
- Vesely, Jan (Ing.) (2011): Brewing and malting industries in 2011 – results and trends, Czech Beer and Malt Association
- Vijn, M.P., Schoutsen, M.A., Monteny, A., Visser, A.J. (2013): Lelystad : PPO - AGV, 2013 (PPO publicatie 559) - 32 p
- Voicilas, D.M. (2007): Alternatives of rural development-organic farming. In: Multifunctional agriculture and rural development – Rural values preservation. Institute of Agricultural Economics-Beograd, ISBN 978-86-82121-48-0, Beograd/Beocin, Serbia
- Voicilas, D.M. (2007): Organic farming. In: Ionel, I. (Ed.): Non-conventional farming economics. Romanian Academy, Institute of Agricultural Economics, Terra Nostra Publishing House, ISBN 973-8432-75-8, 65-125, Iasi, Romania
- Wirsig, A.; Profeta, A.; Lenz, R. (2010): Filderkraut, Schwäbische Maultaschen und Spätzle-Spezialitäten mit geschützter Herkunftsangabe in Markt und Marketing, landinfo 1/2010, S. 55-58, <https://www.landwirtschaft-bw.info/pb/site/lel/get/documents/MLR.LEL/PB5Documents/lel/pdf/s/Spezialit%C3%A4ten%20mit%20gesch%C3%BCtzter%20Herkunftsangabe,Alexander%20Wirsig,%20Terra%20fusca.pdf>
- ZMP (2002): Wie viel Bio wollen die Deutschen? [How many Organic Products do the Germans Want to Consume?] Marktstudie, Nr. K221. ZMP - Zentrale Markt- und Preisberichtsstelle für Erzeugnisse der Land-, Forst- und Ernährungswirtschaft GmbH, Bonn
- Zühlsdorf, A.; Nitzko, S.; Spiller, A. (2013): Kennzeichnung und Aufmachung von Lebensmitteln aus Sicht der Verbraucher: Empirische Untersuchungsbefunde. Agrifood consulting gmbh, Göttingen, http://www.agrifood-consulting.de/fileadmin/agrifood/2013-05-12_LMK_Ergebnisbericht__final.pdf
- Zühlsdorf, A.; Nitzko, S.; Spiller, A. (2013): Kennzeichnung und Aufmachung von Lebensmitteln aus Sicht der Verbraucher: Empirische Untersuchungsbefunde. Agrifood consulting gmbh, Göttingen
- Web Pages:**
- Advisory Committee Geographic Indications, Denominations of Origin and Certification of Specificity (AGOS), <http://www.hpa.nl/voedsel-en-voeding/agos>
- Biokennis <http://www.biokennis.nl/Pages/default.aspx>
- Bionext <http://www.bionext.nl/zakelijk/feiten-cijfers>
- CBS, PBL, Wageningen UR (2013). Biologische landbouw: aantal bedrijven en areaal, 1991-2012 (indicator 0011, versie 12, 13 mei 2013) <http://www.compendiumvoordeleefomgeving.nl>, CBS, Den Haag; Planbureau voor de Leefomgeving, Den Haag/Bilthoven en Wageningen UR, Wageningen. (Compendium voor het Leefmilieu/Environmental Data Compendium)

Czech National Bank (CNB): Exchange rates - monthly averages. [on-line] [cit. 2013-08-05]
URL:<http://www.cnb.cz/cs/financni_trhy/devizovy_trh/kurzy_devizoveho_trhu/prumerne_mena.jsp?mena=eur>

Czech Statistical Office (CSO): Consumer Price Indices – Cost-of-Living. [on-line] [cit. 2013-08-05] URL: <http://www.czso.cz/csu/redakce.nsf/i/isc_cr>

European Commission http://ec.europa.eu/agriculture/quality/schemes/index_en.htm

Hop Growers Union of the Czech Republic, on-line: <http://www.czhops.cz/index.php/en>

<http://www.compendiumvoordeleefomgeving.nl/indicatoren/nl0011-Biologische-landbouw.html?i=11-61>

Program rozvoje venkova České republiky na období 2007-2013 (Czech Rural Development Programme 2007-2013). [on-line] [cit. 2013-08-08] Ministry of Agriculture CR, Prague.
URL:< http://eagri.cz/public/web/file/193481/PRV_aktualni_schvalene_zneni.pdf>

Rijksoverheid <http://www.rijksoverheid.nl>

www.naturalia.ro

Základní statistické údaje ekologického zemědělství (Basic statistical data of organic farming). [on-line] [cit. 2013-07-04] URL: <
<http://eagri.cz/public/web/mze/zemedelstvi/ekologicke-zemedelstvi/statistika-a-pruzkumy/>>

12 Appendix

Annex 1 List of Romanian organizations in organic agriculture, rural development, environmental protection, and durable development (end of 2012)

No. crt.	Name of Organization	Location/web
1.	Federația Națională de Agricultură Ecologică	Cluj www.fnae.ro
2.	Organizația profesională „Agroecologia”	Cluj www.agroecologia.ro
3.	Asociația bioagricultorilor din România „BIOTERRA”	Cluj www.greenagenda.org/bioterra
4.	Asociația Română pentru Agricultură Durabilă	Călărași www.agriculturadurabila.ro
5.	Asociația operatorilor din agricultura ecologica BIO ROMANIA	Calarasi/ www.asociatiaboromania.ro
6.	Asociația Bioavicultorilor din România – BIOAVIROM	Ilfov www.bioavirom.ro
7.	Societatea pentru o Agricultură Ecologică	Cluj
8.	Asociația de Protecția mediului și agricultură ecologică „TER”	București www.ter.ro
9.	Fundația „Mama Terra”	București
10.	„Asociația Națională a Consultanților din Agricultură”	București
11.	Fundația Academică pentru Progres Rural „TERRA NOSTRA”	Iași
12.	„Societatea ecologistă din Maramureș”	Maramureș
13.	„Grupul Ecologic de Colaborare Bucovina”	Suceava
14.	Societatea „Avram Iancu”	Cluj
15.	Fundația „Operațiunea satelor românești”	Bacău
16.	„Clubul Ecologic Transilvania”	Cluj
17.	„Fundația Rurala România”	Timiș
18.	„Bioclub Cluj”	Cluj
19.	„Grupul Grădinarilor Biodinamici”	Mureș
20.	„Asociația Romana de Bioagricultura Aplicată”	Arad
21.	„Centrul de Consultanță Ecologică Galați”	Galați
22.	„Asociația pentru Protecția Mediului si a Naturii”	Mureș
23.	Fundația „Divers Eco”	Maramureș
24.	Fundația „Noema Consulting”	Cluj
25.	Asociația Albina	București http://www.ere-concept.com

26.	Asociația pentru Protecția Mediului și Prezervarea Resurselor	
27.	Asociația „Terra Verde”	București
29.	Asociația Romano-Italiana AgriEcològica	
30.	Asociația Română de Bioagricultură Aplicativă – Ferma Ecologică Familială	Arad
31.	Asociația EcoLogic	Maramureș
32.	Asociația bioagricultorilor din Moldova „BIOMOLD”	Bacău

Source: MADR (Romania)

Annex 2 List of fully registered UK PDO, PGI and TSG Products (July 2013)

Dairy (14 products)

Beacon Fell Traditional Lancashire Cheese (PDO, 1996)

Bonchester Cheese (PDO, 1996)

Buxton Blue Cheese (PDO, 1996)

Cornish Clotted Cream (PDO, 1998)

Dorset Blue Cheese (PGI, 1998)

Dovedale Cheese (PDO, 1996)

Exmoor Blue Cheese (PGI, 1999)

Single Gloucester (PDO, 1996)

Staffordshire Cheese (PDO, 2007)

Swaledale Cheese (PDO, 1996)

Swaledale Ewes' Cheese (PDO, 1996)

Teviotdale Cheese (PDO, 1998)

Stilton – White and Blue Cheese (PDO, 1996)

West Country Farmhouse Cheddar (PDO, 1996)

Alcoholic Drinks (5 products)

Gloucestershire Cider / Perry (PGI, 1996)

Herefordshire Cider / Perry (PGI, 1996)

Kentish ale and strong ale (PGI, 1996)

Rutland Bitter (PGI, 1996)

Worcestershire Cider / Perry (PGI, 1996)

Fish, Molluscs and Crustaceans (8 products)

Arbroath Smokies (PGI, 2004)

Cornish Sardines (PGI, 2009)

Isle of Man Queenies (PDO, 2012)

Lough Neagh Eel (PGI, 2011)

Scottish Farmed Salmon (PGI, 2008)

Scottish Wild Salmon (PGI, 2012)

Traditional Grimsby Smoked Fish (PGI, 2009)

Whitstable Oysters (PGI, 1997)

Meat and Meat Products (16 products)

Cornish Pasty (PGI, 2011)

Isle of Man Manx Loaghtan Lamb (PDO, 2008)

Lakeland Herdwick (PDO, 2013)

Melton Mowbray Pork Pie (PGI, 2010)

Newmarket Sausage (PGI, 2012)

Orkney beef (PDO, 1996)

Orkney lamb (PDO, 1996)

Scotch beef (PGI, 2004)

Scotch lamb (PGI, 2004)

Shetland lamb (PDO, 1996)

Stornoway Black Pudding (PGI, 2013)

Traditional Cumberland Sausage (PGI, 2011)

Traditional Farmfresh Turkey (TSG, 2000)

Traditionally Farmed Gloucestershire Old Spots Pork (TSG, 2010)

Welsh beef (PGI, 2002)

Welsh lamb (PGI, 2003)

Fruit and Vegetables (4 product)

Armagh Bramley Apples (PGI, 2012)

Jersey Royal Potatoes (PDO, 1996)

New Season Comber Potatoes / Comber Earlies (PGI, 2012)

Yorkshire Forced Rhubarb (PDO, 2010)

Miscellaneous (1 product)

Native Shetland Wool (PDO, 2011)

Annex 3 Polish products registered by the European Commission as PDO, PGI and TSG (MINROL, 2014)

PDO:

- bryndza podhalańska, oscypek and redykołka cheeses.
- wiśnia nadwiślanka (cherry variety).
- podkarpacki miód spadziowy (honeydew honey from the Podkarpacie region).
- karp zatorski (carp from the Zator region).
- fasola Piękny Jaś z Doliny Dunajca/fasola z Doliny Dunajca (bean variety from the Dunajec River Valley).
- fasola Piękny Jaś z Doliny Dunajca/fasola z Doliny Dunajca (bean variety from the Dunajec River Valley).
- fasola wrzawska (bean variety from the Podkarpacie region).
- Miód z Sejneńszczyzny or Miód z Łódzkiej (honey).

PGI:

- miód wrzosowy z Borów Dolnośląskich (heather honey from Lower Silesia Forests).
- rogal świętomarciński (crescent-shaped bun from the Wielkopolska region).
- wielkopolski ser smażony (fried cheese from the Wielkopolska region).
- andruty kaliskie (wafers from Kalisz).
- truskawka kaszubska/kaszëbskô malëna (strawberry variety from the Kashubia region).
- fasola korczyńska (bean variety from the Nowy Korczyn area).
- miód kurpiowski (honey from the Kurpie region).
- kielbasa lisecka (sausage from the Małopolska region).
- suska sechłońska (dried plum from the Małopolska region).
- obwarzanek krakowski (bagel-like bread from Cracow).
- jabłka łąckie (apple variety from the Małopolska region).
- śliwka szydłowska (dried plum from Szydłów).
- chleb prądnicki (bread variety from Prądnik, Małopolska region).
- miód drahimski (honey from northwestern Poland).
- jabłka grójeckie (apple variety from Grójec, Mazovia region).
- kołocz śląski/kołacz śląski (raised cake from Silesia).
- ser koryciński swojski (cheese from Podlasie region).
- jagnięcina podhalańska (lamb meat from the Podhale region).

TSG:

- staropolskie miody pitne (old Polish meads) among them półtorak, dwójniak, trójniak and czwórniak.
- olej rydzowy (camelina oil).
- pieriekaczewnik.
- kielbasa jałowcowa (smoked sausage with juniper berries).
- kielbasa myśliwska (hunter's sausage).
- kabanosy (pork sausage with caraway seeds).

Project information

- Title:** International comparisons of product supply chains in the agri-food sectors: determinants of their competitiveness and performance on EU and international markets (COMPETE)
- Funding:** Collaborative research project (small or medium-scale focused research project), FP-7-KBBE.2012.1.4-09, total EU contribution is 2,422,725 €
- Duration:** 01/10/2013-30/09/2015 (36 months)
- Objective:** The objective of the COMPETE project is to gain a more comprehensive view on the different elements which contribute to the competitiveness of the European agri-food supply chain in order to provide better targeted and evidence based policies on the EU as well as on the domestic level. The project investigates selected determinants of competitiveness like policy interventions and the business environment, productivity in agriculture and food processing, the functioning of domestic and international markets, the choice of governance structures, and innovative activities in food processing. The research results will enable a congruent, coherent and consistent set of policy recommendations aiming at improving competitiveness of European product supply chain.
- Coordinator:** IAMO, Germany, Prof. Heinrich Hockmann
- Consortium:** 16 Partners from 10 European countries. COMPETE brings together academics, trade bodies, NGOs, agricultural co-operative, industry representative advisory services. In addition, the project is supported by the group of societal actors, incorporating farmer, food processing and consumer associations, providing in-depth knowledge on the agri-food sector and speeding up the achievement of the project goals.
- Contact:** compete@iamo.de
- Website** www.compete-project.eu



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