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State of the Art

ORGANIC FOOD IN CROATIA

FLANDERS INVESTMENT & TRADE MARKET SURVEY

Organic Food in Croatia

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Summary

1 Introduction

In the past decade, there has been an increased interest in organic production, both in Croatia and worldwide. This is the result of several factors. The most important elements of the organic food industry are linking agriculture and tourism, improving overall tourism, increasing consumer concerns for health, and increasing the area of uncultivated land suitable for organic production.

Croatia possesses a very good platform to create a specific environmental identity in the eyes of domestic customers and exporting organic products to countries with higher standards.
The country also has many comparative advantages for developing organic food production. The Croatian geographical conditions, for example, are very favorable for organic farming. The diversity of climate, soils, crops, the environmental situation and the structure and diversity of economic activities are great advantages for the development of ecological agriculture.

However, despite the great importance of organic production and the concrete figures on arable area, production volume, etc., there is still a shortage of producers. Efforts to establish organic agriculture in Croatia are not easy, but they are certainly necessary and can be cost effective.

The main objectives of this paper were to examine the organic food market in Croatia: on the field of production and distribution, to study the consumer perception of organic food according to factors that encourage the consumption of organic products and to inform about organic logo and labelling rules.

The research data is important for both food producers and traders. It shows improvement in key elements of the placement of Croatian organic products, increasing availability of organic food to average Croatian consumers, and increased production surfaces for organic products.

In the past few years, Croatia recorded an increase of 377% in the area of organically farmed agricultural products. The number of healthy food producers also increased and it is 10 times higher than in 2010. More specifically, in 2010, Croatia registered 16 000 hectares of organic farming, while 76,000 hectares were registered in 2015.

2 General overview of the republic of Croatia

2.1 The following table present some general information about Croatia.

Land area	56,594 sq. km
Surface area of territorial sea and interior sea waters	31 479 sq. km
The highest point	Dinara (1,831m)
Number of islands	1,185 (47 inhabited)
Population	4.4m (2017)
Capital	Zagreb (800 000 inhabitants)
Official language	Croatian
Religion	Roman Catholic 86.3%, Orthodox 4.4%, Muslim 1%.
Currency	Croatian Kuna (HRK)
Natural resources endowments	Oil, some coal, bauxite, low-grade iron ore, calcium, gypsum, natural asphalt, silica, mica, clays, salt, hydropower.

2.2 Political profile

Government	Parliamentary Democracy
Major Political Parties	Social Democratic Party of Croatia (SDP) Croatian Democratic Union Croatian People's Party (HNS)
Membership of International Organisations	United Nations European Union NATO World Bank World Trade Organisation

2.3 Indicators

INDICATOR	MONTHS	YEAR	VALUE
GROSS DOMESTIC PRODUCT, % REAL ANNUAL GROWTH RATES	q3	2016	2,9
INDUSTRIAL PRODUCTION, % ANNUAL CHANGES	10	2016	1,8
CONSUMER PRICES, % ANNUAL CHANGES	10	2016	-0,5
PRODUCER PRICES, % ANNUAL CHANGES	10	2016	-2
RETAIL TRADE, % REAL ANNUAL CHANGES	10	2016	5,3
TOURISM - NIGHT STAYS, % ANNUAL CHANGE	9	2016	11,5
CONSOLIDATED CENTRAL GOVERNMENT BALANCE, HRK MILLION, ESA 2010		2015	-10.706
CONSOLIDATED CENTRAL GOVERNMENT BALANCE, % OF GDP, ESA 2010		2015	-3,2
AVERAGE MONTHLY NET WAGE, HRK	9	2016	5,624
UNEMPLOYMENT RATE, % EOP	10	2016	14
NUMBER OF REGISTERED UNEMPLOYED PERSONS	10	2016	225,703
AVERAGE EXCHANGE RATE EUR/HRK	10	2016	7,5
AVERAGE EXCHANGE RATE USD/HRK	10	2016	6,8
AVERAGE EXCHANGE RATE CHF/HRK	10	2016	6,89
EXPORT OF GOODS, EUR MILLION (CBS)	8	2016	927
IMPORT OF GOODS, EUR MILLION (CBS)	8	2016	1,568
CURRENT ACCOUNT BALANCE, EUR MILLION	q2	2016	152,2
CURRENT ACCOUNT BALANCE, % OF GDP	q2	2016	4,6
EXTERNAL DEBT, EUR BILLION, EOP	8	2016	43,672
EXTERNAL DEBT, % OF GDP	6	2016	97,3
PUBLIC DEBT, % OF GDP, ESA 2010		2014	85,1
OFFICIAL INTERNATIONAL RESERVES, EUR MILLION, EOP	10	2016	12,993
MONEY (M1), HRK MILLION, EOP	10	2016	78,783
TOTAL CREDITS, HRK MILLION, EOP	10	2016	259,746
DEPOSITS WITH COMMERCIAL BANKS, HRK MILLION, EOP	10	2016	207,261

3 General figures of Republic of Croatia

The economy of Croatia is a service-based economy with the tertiary sector accounting for 70% of the total gross domestic product (GDP). After the collapse of Communism, Croatia went through a process of transition to a market-based economy in the 1990s, but its economy suffered badly during the 1991-1995 war. After the war the economy began to improve; before the financial crisis of 2007–08, the Croatian economy grew at a healthy 4-5% annually, incomes doubled, and economic and social opportunities dramatically improved.

But after the 2008-2009 crisis, the country struggled with six years of recession.

Croatia's economic freedom score is 61.5, making its economy the 81st freest in the 2015 Index. Its overall score is 1.1 points better than last year, reflecting improvements in five of the 10 economic freedoms including freedom from corruption, fiscal freedom, and labor freedom.

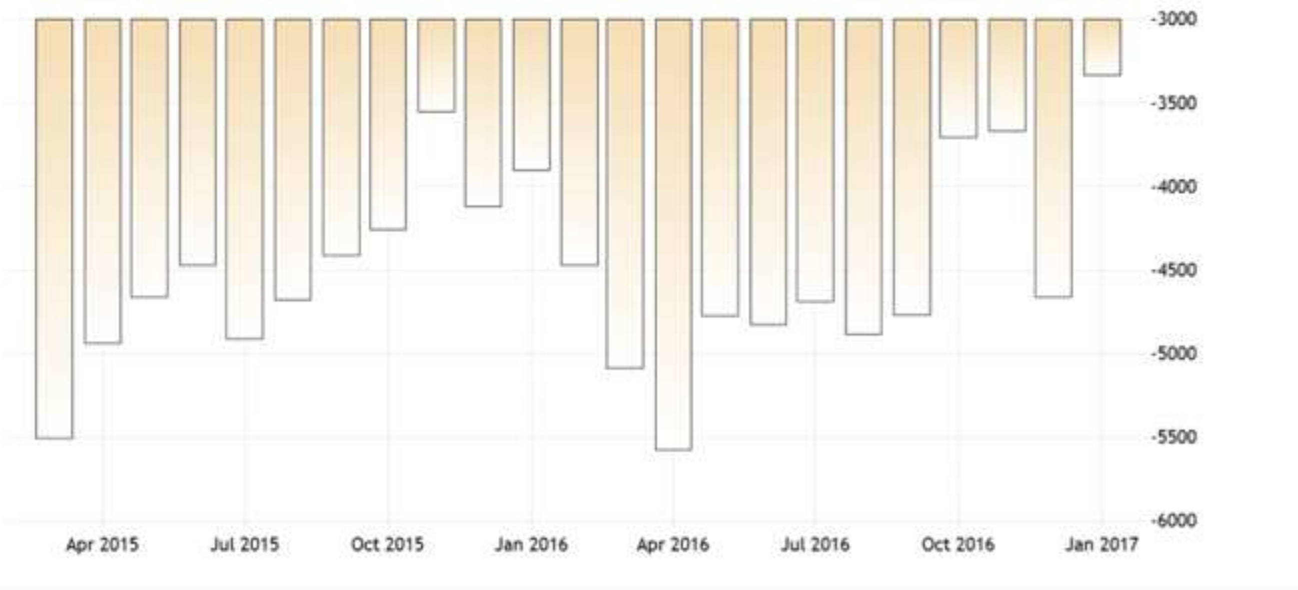
Croatia has registered its highest score ever in the 2015 Index, but it continues to lag behind many other emerging economies in the region, and its overall score remains below the regional average.

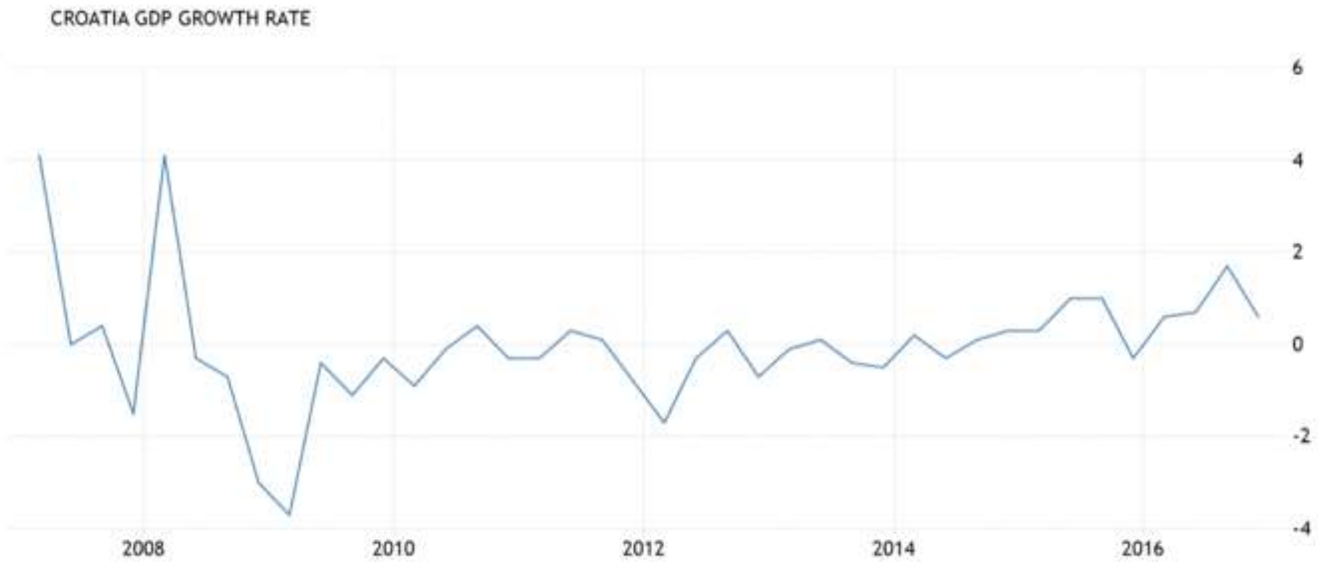
Despite its accession to the European Union in 2013, Croatia still suffers some of the difficulties facing other transitional economies. An independent judiciary has not been fully established, and there are delays and backlogs in adjudicating cases.

High levels of corruption persist in business, education, and basic government services. Land registry offices need further reform to guarantee clearly defined property rights.

An uncertain civic environment and fiscal pressures will continue to challenge efforts to build on Croatia's modest improvements in economic freedom over the past five years. Reforms to open up the investment regime should help the country to integrate more fully into the European market.

Balance of trade in Croatia: http://fr.tradingeconomics.com/croatia/balance-of-trade





Source: http://www.tradingeconomics.com/croatia/gdp-growth

4 The organic food market in Croatia

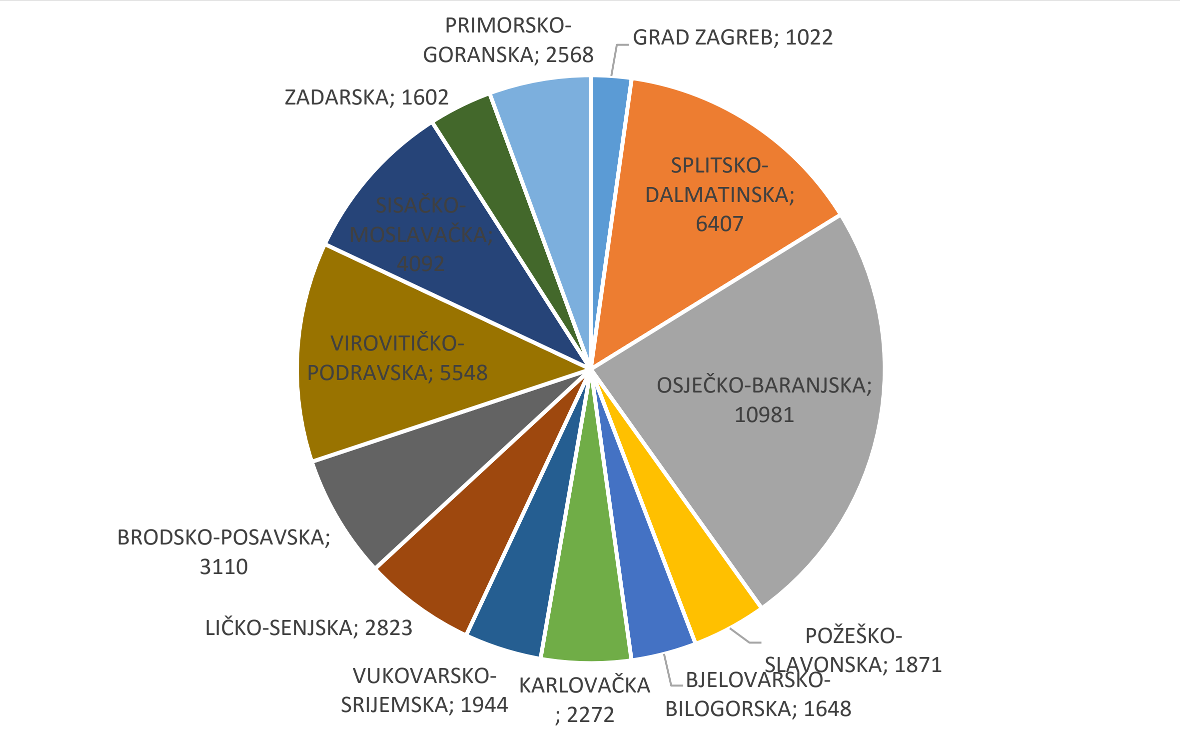
4.1 The share of organic area in the total utilized agricultural land

Year	Total utilised agricultural land, ha	Organic agricultural production ha	The share of organic in total use of agricultural land %
2010.	1.333,835,00	23.282,37	1,75
2011.	1.326.083,00	32.035,80	2,42
2012.	1.330,973,00	31.903,59	2,40
2013.	1.568,881,00	40.576,00	2,59
2014.	1.508,885,00	50.054,22	3,32
2015	1.537,629,00	75.883,00	4,94

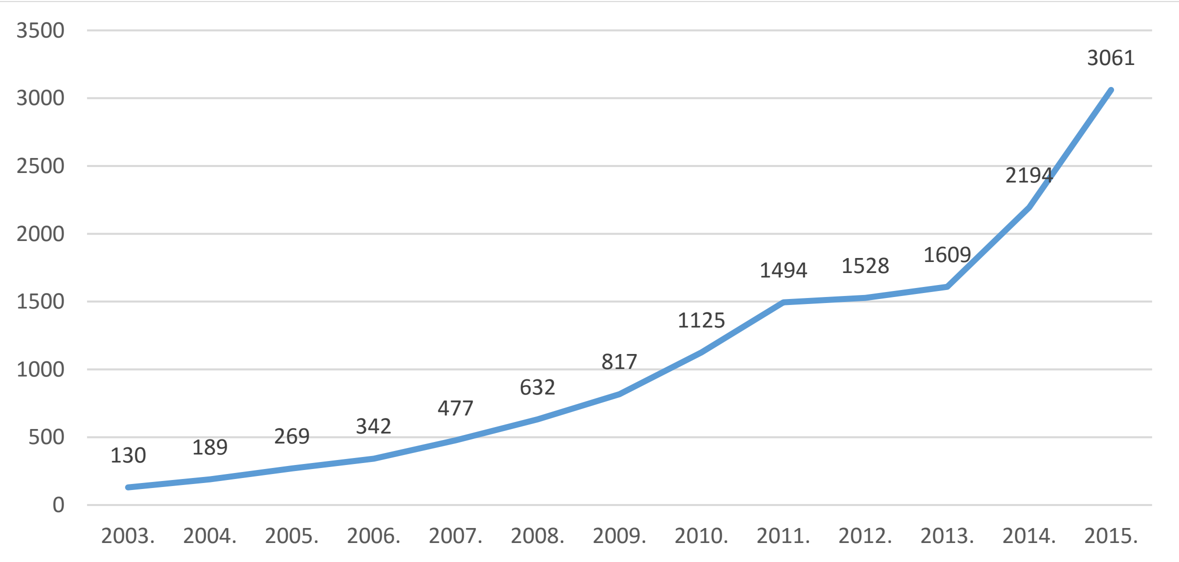
Source: Ministry of Agriculture, Fisheries and Rural Development,

4.2 Area under organic production (ha) in 2014 by region

Source: Ministry of Agriculture, Fisheries and Rural Development (2017) Organic agriculture



4.3 Organic food producers entered in the Register of producers in organic production in the period from 2003 to 2015



Source: Ministry of Agriculture, Fisheries and Rural Development (2017), There were 17 producers of organic food on an area of 12.5 ha in 2000, who had a certificate issued by internationally recognized organizations. The number of producers in 2001 increased to 25 and the area under organic production totaled 100 ha. Due to the fact that these dates refer to the period before passing the Act on Organic Production of Agricultural Products and Foodstuffs, they were not officially recorded and thus the tallying of the number of domestic producers began in 2002, when two producers were recorded. In 2003, 130 producers were registered, whereas in 2005 a significant increase in the number of organic food producers was observed, an increase of more than 100% compared to 2003. Since then, the number of organic food producers has been continuously increasing, which is shown in the graph.

4.4 Production in Croatia

The 2015 data on organic farming covers a number of organic agricultural producers and processors, organic agricultural land use by categories, production of crops and permanent crops, organic livestock by type of species and organic products of animal origin. The number of organic agricultural producers amounted to 3061 in 2015 and the number of organic agricultural processors to 320. The agricultural area amounted to 75 833 ha, of which arable land had a share of 45.2%, permanent grassland of 44.3% and permanent crops of 10.5%.

The realized yield of cereals for the production of grain (including seeds) amounted to 31 066 tons in 2015. The yield was 4 562 t of root crops, 13 055 t of industrial crops, 52 467 t of plants harvested *green* from arable land and 1 404 t of fresh vegetables and strawberries.

The number of organic bovine animals amounted to 7 002 in 2015, the number of pigs to 1 114, the number of sheep to 23 774 and the number of goats to 2 163.

4.4.1 Number of organic agricultural producers and processors

NUMBER OF ORGANIC AGRICULTURAL PRODUCERS AND PROCESSORS, 2015

	Šifra[1)]	Ukupno *Total*	*New Cronos code*[1)]	
Poljoprivredni proizvođači	PRD_AGRI	3 061	*PRD_AGRI*	*Agricultural producers*
Poljoprivredni prerađivači	PRC	320	*PRC*	*Agricultural processors*

1) New Cronos je šifarnik prema kojem je uređena Eurostatova baza podataka.
1) New Cronos is a list of codes by which Eurostat's databank has been arranged.

4.4.2 Organic agricultural land use, by categories

ORGANIC AGRICULUTRAL LAND USE, BY CATEGORIES, 2015

ha

	Šifra[1)]	Ukupno *Total*	U prijelaznom razdoblju *In conversion*	Završeno prijelazno razdoblje (ekološko) *Fully converted*	*New Cronos code*[1)]	
Korištena poljoprivredna površina	UAAXK000	75 883	50 086	25 797	*UAAXK000*	*Utilised agricultural area (UAA)*
Oranice i vrtovi	ARA	34 281	20 126	14 155	*ARA*	*Arable land*
Trajni travnjaci	J000	33 613	25 493	8 120	*J000*	*Permanent grassland*
Trajni nasadi	PECR	7 989	4 467	3 522	*PECR*	*Permanent crops*

1) New Cronos je šifarnik prema kojem je uređena Eurostatova baza podataka.
1) New Cronos is a list of codes by which Eurostat's databank has been arranged.

4.4.3 Area of arable land in organic farming, by categories

AREA OF ARABLE LAND IN ORGANIC FARMING, BY CATEGORIES, 2015

ha

	Šifra[1]	Ukupno *Total*	U prijelaznom razdoblju *In conversion*	Završeno prijelazno razdoblje (ekološko) *Fully converted*	*New Cronos code*[1]	
Žitarice za proizvodnju zrna (uključujući sjeme)	C0000	9 688	5 411	4 277	*C0000*	*Cereals for production of grain (including seed)*
Suhe mahunarke i proteinski usjevi za proizvodnju zrna (uključujući sjeme i mješavine žitarica i mahunarki)	P0000	36	14	22	*P0000*	*Dry pulses and protein crops for production of grain (including seed and mixtures of cereals and pulses)*
Korjenasti usjevi	R0000	405	299	106	*R0000*	*Root crops*
Industrijsko bilje	I0000	9 937	5 856	4 081	*I0000*	*Industrial crops*
Zelena krma sa oranica i vrtova	G0000	12 221	7 017	5 204	*G0000*	*Plants harvested green from arable land*
Svježe povrće (uključujući dinje i lubenice) i jagode	V0000_S0000	343	147	196	*V0000_S0000*	*Fresh vegetables (including melons) and strawberries*
Ugari	Q0000	1 651	1 382	269	*Q0000*	*Fallow land*

1) New Cronos je šifarnik prema kojem je uređena Eurostatova baza podataka.
1) *New Cronos is a list of codes by which Eurostat's databank has been arranged.*

4.4.4 Area of permanent crops in organic farming, by categories

AREA OF PERMANENT CROPS IN ORGANIC FARMING, BY CATEGORIES, 2015

ha

	Šifra[1]	Ukupno *Total*	U prijelaznom razdoblju *In conversion*	Završeno prijelazno razdoblje (ekološko) *Fully converted*	*New Cronos code*[1]	
Trajni nasadi za ljudsku prehranu	H0000	7 886	4 443	3 443	*H0000*	*Permanent crops for human consumption*
Voće, bobičasto voće i orašasto voće (osim agruma, grožđa i jagoda)	F0000	5 630	3 166	2 464	*F0000*	*Fruits, berries and nuts (excluding citrus fruits, grapes and strawberries)*
Agrumi	T0000	9	9	-	*T0000*	*Citrus fruits*
Grožđe	W1000	913	483	430	*W1000*	*Grapes*
Masline	O1000	1 334	785	549	*O1000*	*Olives*
Rasadnici	U0000	25	12	13	*U0000*	*Nurseries*
Ostali trajni nasadi	PECR9	78	12	66	*PECR9*	*Other permanent crops*

1) New Cronos je šifarnik prema kojem je uređena Eurostatova baza podataka.
1) *New Cronos is a list of codes by which Eurostat's databank has been arranged.*

4.4.5 Production of crops and permanent crops in organic farming, by categories

PRODUCTION OF CROPS AND PERMANENT CROPS IN ORGANIC FARMING, BY CATEGORIES, 2015

	Šifra[1)]	Proizvodnja, t *Production, t*	*New Cronos code[1)]*	
Žitarice za proizvodnju zrna (uključujući sjeme)	C0000	31 066	*C0000*	*Cereals for production of grain (including seed)*
Pšenica i pir	C1100	11 664	*C1100*	*Wheat and spelt*
Raž i suražica	C1200	742	*C1200*	*Ray and maslin*
Ječam	C1300	2 480	*C1300*	*Barley*
Zob i mješavine jarih žitarica (mješavina zrna bez suražice)	C1400	1 777	*C1400*	*Oats and spring cereal mixtures (mixed grain other than maslin)*
Mješavina kukuruza u zrnu i kukuruza u klipu	C1500	11 921	*C1500*	*Grain maize and corn-cob-mix*
Ostale žitarice (uključujući pšenoraž i sirak)	C1600_1700_1900	2 482	*C1600_1700_1900*	*Other cereals (including triticale and sorghum)*
Suhe mahunarke i proteinski usjevi za proizvodnju zrna (uključujući sjeme i mješavine žitarica i mahunarki)	P0000	134	*P0000*	*Dry pulses and protein crops for production of grain (including seed and mixtures of cereals and pulses)*
Korjenasti usjevi	R0000	4 562	*R0000*	*Root crops*
Krumpir (uključujući sjemenski krumpir)	R1000	25	*R1000*	*Potatoes (including seed potatoes)*
Šećerna repa (isključujući sjemensku)	R2000	3 794	*R2000*	*Sugar beet (including seed)*
Ostali korjenasti usjevi	R9000	743	*R9000*	*Other root crops*
Industrijsko bilje	I0000	13 055	*I0000*	*Industrial crops*
Uljarice	I1100	11 007	*I1100*	*Oilseeds*
Aromatsko, ljekovito i začinsko bilje	I5000	1 979	*I5000*	*Aromatic, medicinal and culinary plants*
Ostalo industrijsko bilje	I6000_9000	69	*I6000_9000*	*Other industrial crops*
Zelena krma sa oranica i vrtova	G0000	52 467	*G0000*	*Plants harvested green from arable land*
Svježe povrće (uključujući dinje i lubenice) i jagode	V0000_S0000	1 404	*V0000_S0000*	*Fresh vegetables (including melons) and strawberries*
Svježe povrće (uključujući dinje i lubenice)	V0000	1 372	*V0000*	*Fresh vegetables (including melons)*
Jagode	S0000	32	*S0000*	*Strawberries*
Trajni nasadi za ljudsku prehranu	H0000	11 869	*H0000*	*Permanent crops for human consumption*
Voće, bobičasto voće i orašasto voće (osim agruma, grožđa i jagoda)	F0000	6 316	*F0000*	*Fruits, berries and nuts (excluding citrus fruits, grapes and strawberries)*
Grožđe	W1000	4 905	*W1000*	*Grapes*
Masline	O1000	611	*O1000*	*Olives*
Agrumi	T0000	37	*T0000*	*Citrus fruits*

1) New Cronos je šifarnik prema kojem je uređena Eurostatova baza podataka.
1) New Cronos is a list of codes by which Eurostat's databank has been arranged.

4.4.6 Number of head of organic livestock by type of species

NUMBER OF HEAD OF ORGANIC LIVESTOCK, BY TYPE OF SPECIES, 2015

	Šifra[1)]	Broj grla *Number of head*	*New Cronos code[1)]*	
Goveda	A2000	7 002	*A2000*	*Bovine animals*
Svinje	A3100	1 114	*A3100*	*Pigs*
Ovce	A4100	23 774	*A4100*	*Sheep*
Koze	A4200	2 163	*A4200*	*Goats*
Perad	A5000	2 093	*A5000*	*Poultry*
Kopitari	A1100	265	*A1100*	*Equidae*
Kunići	A6110	5	*A6110*	*Rabbits*
Pčelinje zajednice	A6710	3 418	*A6710*	*Bees (in number of hives)*

4.4.7 Organic products of animal, origin

ORGANIC PRODUCTS OF ANIMAL ORIGIN, 2015

t

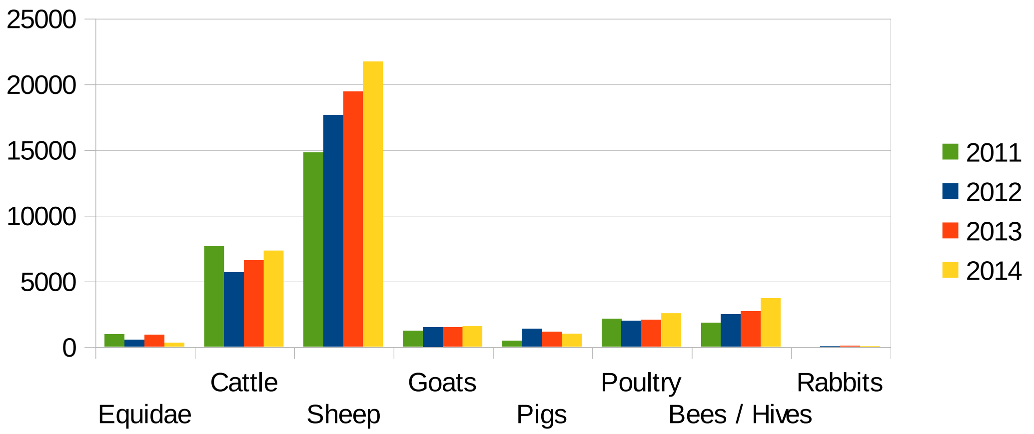
	Šifra[1)]	Ekološki proizvodi *Organic products*	*New Cronos code[1)]*	
Govedina, teletina	B1000	811	*B1000*	*Beef and veal*
Svinjetina	B3100	60	*B3100*	*Pig meat*
Ovčetina	B4100	316	*B4100*	*Sheep meat*
Kozetina	B4200	13	*B4200*	*Goat meat*
Kravlje mlijeko (sirovo)	D1110A	5 947	*D1110A*	*Cow's milk (raw)*
Kozje mlijeko (sirovo)	D1130A	40	*D1130A*	*Goat's milk (raw)*
Med	D9910	48	*D9910*	*Honey*
Konzumna jaja (broj)	D8000H	117 775	*D8000H*	*Eggs for consumption (number)*

1) New Cronos je šifarnik prema kojem je uređena Eurostatova baza podataka.
1) New Cronos is a list of codes by which Eurostat's databank has been arranged.

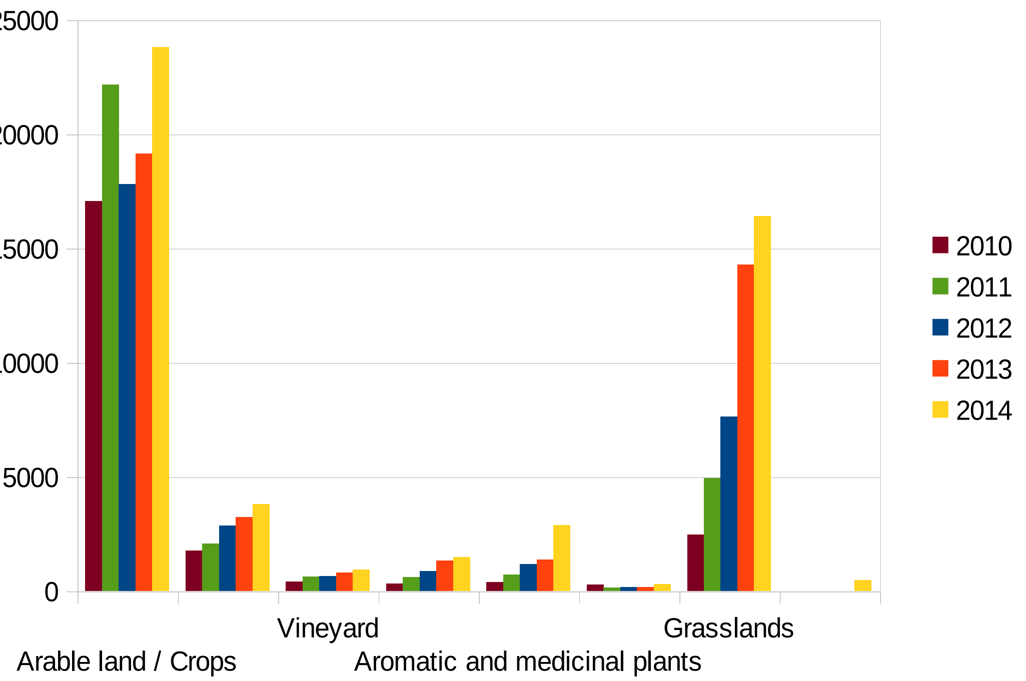
Source: http://www.dzs.hr

4.4.8 Organic livestock production (in numbers) in Croatia 2011- 2014

Over the past years, the total organic livestock production in Croatia ranks sheep farming at the first place, followed by cattle farming, poultry farming and apiculture as showed in the following graphs.



Source: Ministry of Agriculture, Fisheries and Rural Development



Source: Ministry of Agriculture, Fisheries and Rural Development

4.4.9 Plant production

According to the Ministry of Agriculture, there were only 130 registered organic producers in 2013 and 3061 in 2015 in Croatia, and ecological production at 76,000 hectares had a share of a little less than five percent of the total used agricultural land which is almost on par with the average level of the entire EU.
According to the data, most organic plant production was on arable land of more than 36,000 hectares and on pastures of more than 27,000 hectares, which actually explains the huge Croatian five-year jump.

ha	*2011.*	*2012.*	*2013.*	*2014*	*2015.*
Arable land	22.156	17.815	19.183	23.802	30.444
Orchards	2.058	2.851	3.239	3.790	5.638
Vineyards	614	634	791	931	913
Olive groves	600	860	1.330	1.472	1.334
Meadows and pastures	4.943	7.635	14.279	16.403	33.612
Fallow	452	720	293	477	-
Forests (rough terrain)	352	69	-	-	-
Vegetables	143	160	165	304	343
Herbs	718	1.159	1.368	2.876	3.494
Nurseries and other permanent crops	-	-	-	-	103
Number of farms	1.494	1.528	1.609	2.194	3.061
TOTAL AREA	32.036	31.904	40.660	50.054	75.883

4.4.10 Area and production of cereals and other crops in 2015

According to the previous data, the actual yield of soya beans in 2015 amounted to 195 000 tons, which was 49% more than previous year's final yield. The total yield of other important late crops also increased: silage maize by 4% and potatoes by 6%.
It is expected that the yield of sugar beet will decrease by 46%, of maize by 17%, of sunflowers by 6% and of lucerne by 2%, as compared to the previous year.

AREAS AND PRODUCTION OF CEREALS AND OTHER CROPS, 2015 – previous data

	Ostvareni prirod *Actual yield*						Indeksi ostvarenog priroda *Indices of actual yield* 2015. / 2014.	
	površina, tis. ha *Area, '000 ha*	prirod po ha, t *Yield per hectare, t*	ukupno, tis. t *Total, '000 t*	površina, tis. ha *Area, '000 ha*	prirod po ha, t *Yield per hectare, t*	ukupno, tis. t *Total, '000 t*		
	2014.			2015.				
Kukuruz – ukupno[1)]	253	8,1	2 047	263	6,5	1 708	83	*Maize, total[1)]*
Krumpir (kasni i sjemenski)	9	16,0	137	8	17,6	145	106	*Potatoes (late and seed potatoes)*
Soja[2)]	47	2,8	131	88	2,2	195	149	*Soya-beans[2)]*
Suncokret	35	2,9	99	34	2,7	93	94	*Sunflowers*
Šećerna repa	22	63,6	1 392	14	54,5	757	54	*Sugar beets*
Lucerna, sijeno	22	5,8	129	18	6,9	126	98	*Lucerne, hay*
Silažni kukuruz[3)]	29	35,3	1 016	32	32,9	1 059	104	*Silage maize[3)]*

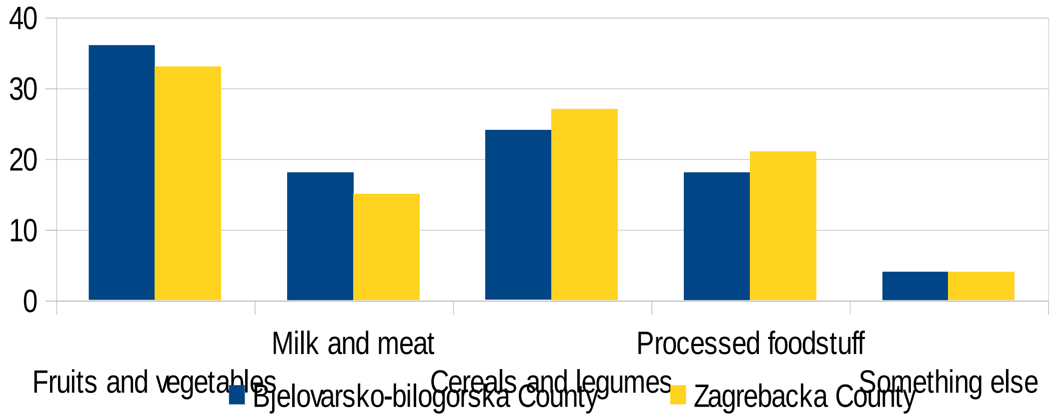
1) Uključeni su merkantilni i sjemenski kukuruz.
2) Uključeni su merkantilna, sjemenska i soja za stočnu hranu.
3) Uključeni su glavni i naknadni silažni kukuruz.

1) *Including mercantile and seed maize.*
2) *Including mercantile, seed soya and soya-beans for fodder.*
3) *Including main and subsequent crop of silage maize.*

Source: http://www.dzs.hr/Hrv_Eng/publication/2015/01-01-18_01_2015.htm

5 Buying behavior [1]

It was found that the largest percentage of consumers use organic products on a daily basis, 35% of them use such products monthly, and 27% do so several times a week. The type of organic food purchased by respondents is mostly fruit and vegetables (34%), followed by cereals and legumes (25%), the smallest number primarily buy milk and meat (17%).



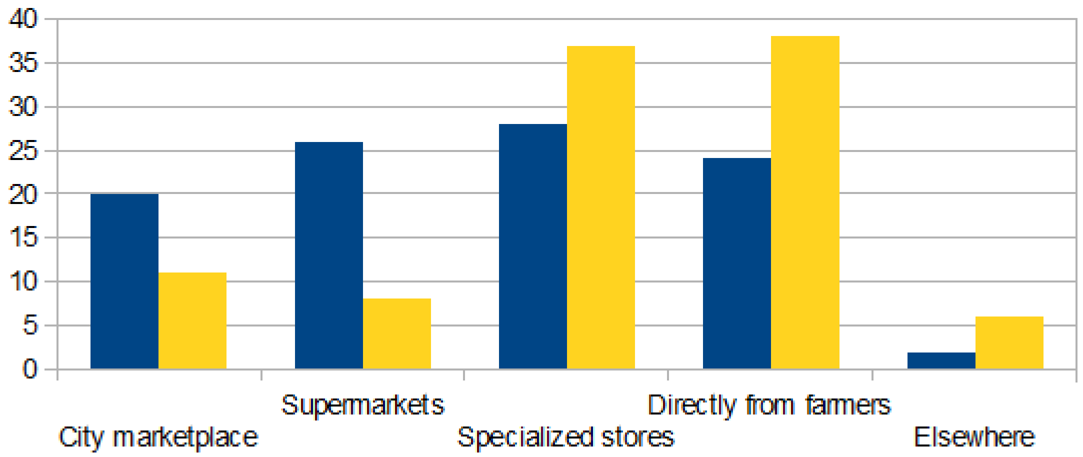
[1] CONSUMER PERCEPTION OF ORGANIC FOOD IN CROATIA, SVRŽNJAK Kristina , JERČINOVIĆ Silvije , PERČEC Nikolina , FIRŠT GODEK Lidija, http://journal.ke.hu/etm/index.php/etm/article/viewFile/101/58, 2015

The reasons for purchasing organic foods are most often medical (56%). It seems consumers perceive health effects as a major motive for buying organic food, followed by the quality of organic products. Availability and greater choice of products are also motives that may influence the greater use of organic food in the diet. Among consumers, the largest share is made up of those who have been buying organic food in the last 10 years and longer (27%), but the proportion of those who have been buying organic food in recent few years is also considerable (17%).

	Health reasons	Quality	Better taste	Concern for the environment	Something else
BBC	3,34	3	2,82	3,36	0
ZC	4,55	4	3,3	3,98	0
	3,96	3,06	3,06	3,62	0

5.1 Place of purchase

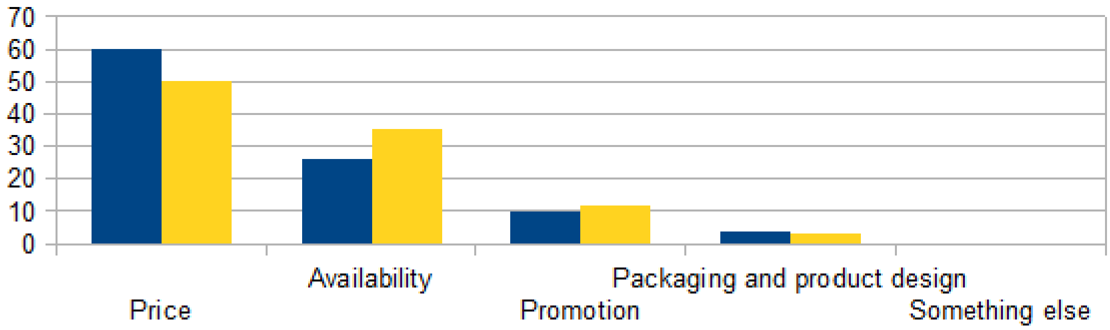
Zagreb county respondents purchase organic food mostly in specialized stores, while consumers in Bjelovarsko bilogorska got it directly from producers (Fig. 2). The least frequent places of purchase for organic products are green markets (16%).



5.2 Satisfaction with organic food [2]

Most consumers are of the opinion that organic food offerings could be better (51%), 19% of them are satisfied with the offerings, 30% of them are not satisfied with the organic food offered on the market. These studies lead to the conclusion that it is necessary to improve the supply of organic food. The data obtained reveal a significant step forward compared to earlier research conducted in Croatia (LONČAR et al., 2009), where the majority of respondents (61%) declared that the offer of organic food was in accordance with the demand. Regarding the decision to buy domestic or imported organic food, 98% of respondents prefer to buy local organic food, while only 2% of respondents opted for imported organic food. Such a high percentage of responses for the purchase of domestic versus imported organic product suggests that Croatian organic agriculture has very good prospects for the future.

5.3 The source of information about organic products [3]



5.4 Motives for refusal of organic food purchase [4]:

The study revealed interesting results that show how many respondents check a product label. The results show that 51% of respondents always look at the origin of the product labelling, 46% sometimes, and 3% of respondents never pay attention to it.

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[2] Organic Food Consumers Purchase Patterns – Insights from Croatian Market; Vesna Brčić-Stipčević, Kristina Petljak, Irena Guszak, https://bib.irb.hr/datoteka/688252.1326-5291-1-PB.pdf, 2015

[3] Organic Food Consumers Purchase Patterns – Insights from Croatian Market; Vesna Brčić-Stipčević, Kristina Petljak, Irena Guszak, https://bib.irb.hr/datoteka/688252.1326-5291-1-PB.pdf, 2015

[4] Organic Food Consumers Purchase Patterns – Insights from Croatian Market; Vesna Brčić-Stipčević, Kristina Petljak, Irena Guszak, https://bib.irb.hr/datoteka/688252.1326-5291-1-PB.pdf, 2015

5.5 Organic food purchase by financial status

Organic food purchase	Financial status Much worse than average		Slightly below average		Average, like majority		Slightly better than average		Much better than average	
	f	%	f	%	f	%	f	%	f	%
Never	48	77,4	48	46,2	264	50,2	22	31,9	3	42,9
Rarely	8	12,9	43	41,3	202	38,4	34	49,3	1	14,3
Often	6	9,7	13	12,5	60	11,4	13	18,8	3	42,9
X^2, p	X^2=36,634 ; p<0,01									

A statistically significant difference in the purchase of organic food according to the perceived financial status of respondent was found ($\chi 2=36.634$, $p<0.01$). Organic food is often bought by the largest percentage of respondents who perceive that their financial status is much better than average (42.9%), and by the smallest percentage of respondents who perceive their financial status is much worse than the average (9.7%). Organic food is rarely bought by the largest percentage of respondents who perceive their financial status is slightly better than average (49.3%), and by the smallest percentage of respondents who perceive their financial status is much worse than the average (12.9%). Organic food is never bought by the largest percentage of the respondents who consider their financial status is much worse than the average (77.4%) and it is in the least extent bought by respondents whose financial status is slightly better than average (31.9%). Surprisingly, no statistically significant difference by source of income in the purchase of organic food was found ($\chi 2 =2.558$, $p>0.05$).

5.6 Organic food purchase by monthly household income:[5]

Organic food purchase	Monthly household income Up to 1,800 HRK		1,801 – 3500 HRK		3,501 – 5500 HRK		5,501 – 8000 HRK		8,001 – 11,000 HRK		Over 11,000 HRK	
	f	%	f	%	F	%	f	%	f	%	f	%
Never	29	59,2	64	54,7	65	58	60	46,2	36	33,6	32	41,6
Rarely	15	30,6	39	33,3	35	31,3	59	45,4	57	53,3	35	45,5
Often	5	10,2	14	12	12	10,7	11	8,5	14	13,1	10	13
X^2 , p	X^2=22,123 ; p<0,05											

A statistically significant difference was found in the purchase of organic food according to the level of monthly household income ($\chi 2$ =22.123, $p<0.05$). Organic food is often purchased by the largest percentage of respondents whose monthly household income is between 8.001 and 11.000 HRK (13.1%) and respondents with monthly household income over 11.000 HRK (13.0%), whereas it is often purchased by the smallest percentage of respondents with a household income between 5.501 and 8.000 HRK (8.5%). Organic food is rarely bought by the largest percentage of respondents whose household monthly income is between 8.001 and 11.000 HRK (53.3%), and it is rarely bought by the smallest percentage of respondents with a household income up to 1.800 HRK per month (30.6%).
Organic food is never bought by the highest percentage of respondents with a household income up to 1.800 HRK (59.2%), and lowest percentage of respondents whose monthly household income is between 8.001 and 11.000 HRK (33.6%).

6 Organic food distribution channels

One of the first researches on the organic food distribution channels was conducted in Eastern Croatia, when the marketing-mix and the characteristics of organic food were investigated. Results show that in Eastern Croatia, organic food is distributed through direct distribution channels, in the open markets and fairs mainly, and through door-to-door sales.

On rare occasions organic food is distributed through indirect distribution and then mainly through specialized health food shops and supermarkets.

The authors have concluded that indirect distribution of organic food is becoming more significant. Research on consumers' habits when buying organic food, has revealed that consumers buy organic food mostly in supermarkets and specialized health food shops. Based on this, we conclude that the share of health food shops is relatively low and the one of supermarkets high, which implies that the main distribution channels of organic food in Croatia are specialized health food shops.

[5] Organic Food Consumers Purchase Patterns – Insights from Croatian Market; Vesna Brčić-Stipčević, Kristina Petljak, Irena Guszak, https://bib.irb.hr/datoteka/688252.1326-5291-1-PB.pdf, 2015

As the possibility of organic food marketing is one of the key factors of development, we analyzed the distribution of organic products in Croatia. Results show that the local market is the most important for domestic producers followed by organic associations and the tourist market.

Small producers are not competitive enough for offering their products in a bigger market. Another reason is the fact that potential customers are not well informed; because of that, a consumer-seller (producer) contact is of extreme importance.

Significant links in the distribution of products are organic associations and the tourist market which hold great potential for the future development of organic agriculture in Croatia. Bigger producers sell their products to supermarket chains, the meat industry and butchers, whereas smaller producers have to sell their products to intermediaries, usually at a lower price, to prevent their production from going to waste.

In addition, they sell their products to restaurants, milk factories and via the internet. For further analysis, the distribution channels of organic food in Croatia have been classified into:

(1) Direct
(2) Indirect
(3) Emerging distribution channels.

6.1 Direct distribution channels of organic food:

(1) On-farm sales
(2) Door-to-door sales
(3) Farmers markets
(4) Fairs and fair exhibitions
(5) Farm shops

In Croatia, a great number of farms are not capable of producing large quantities of organic food. Thus, the small quantities of organic food they produce are distributed through direct channels. Direct distribution increases the income as the money stays on the farm.

Direct sales are the most important distribution channel for domestic producers, but are also important for consumers, since they develop trust through direct contact with producers and, at the same time, give feedback more efficiently.

For domestic producers of organic food, direct sales are very often the easiest way of selling. The produce that wants to engage in direct sales of organic food faces numerous organizational changes. In order to begin with direct sales, the producer, in addition to his primary activity of organic production, takes on new responsibilities such as storage, processing and sales which is time consuming and brings numerous business obligations.

Due to direct sales, organic food producers have an additional burden of processing and marketing. The sale of processed products significantly increases income, but also the activities on the farm.

Only farms with well-developed entrepreneurial characteristics can meet all the requirements. Moreover, these farms also have to meet other requirements of direct sales such as the type of the product sold at the farm, the vicinity of the market and farm capacities. The farm that wants to engage in direct sales more seriously, has to invest in storage areas, processing facilities and distribution facilities, especially if it is in the stage of conversion from conventional to organic production, when it is necessary to prevent contact between conventionally produced products with organic ones.

Door-to-door sales include on-line sales, orders per telephone or fax and a permanent order: box-schemes (zelena košara). The organic box-scheme is a system of organic food delivery to the customers' address. Consumers themselves decide on the frequency of delivery (usually once a week), whereas the content of delivery depends on the consumers' needs, but also on the seasonal offer. The box-scheme is a mutual project of the Sever family farm (obiteljsko poljoprivredno gospodarstvo – OPG) and the Ecologica Association launched in 2005. The Box-scheme Gazette (Vjesnik Zelene eko-košare), with the information on the offer, but also recipes of the family farm Sever, is published on the Ecologica website.

Farmers markets are traditionally one of the most important ways of direct sales in Croatia, in particular for fresh fruit and vegetables. This way of organic food sales involves transportation costs and the costs of the market stall which include daily and monthly reservation.

There are no official records of domestic producers selling at farmers markets, but it is known that, for example, the Sever family farm offers its products at Dolac, Trešnjevka and Utrina farmers' markets in Zagreb.

Fairs are occasional sales events which are usually organized at the time when certain products are harvested. They are mostly held in bigger towns and in large open areas or halls attended by numerous organic food producers. Apart from the sales effect, they are important for the promotion of organic food.

Some of the most significant fairs at which domestic producers of organic food exhibit their products are Croatian Village Products and the international fair of rural products and services Eko Etno Hrvatska. Fairs and exhibitions are held in different counties at different intervals.

The Ministry of Agriculture, Fisheries and Rural Development, supported by the Croatian Chamber of Economy, financed the presentation of organic food produced by Croatian producers at BioFach.

Producers of organic food also sell their products in their own shops. Data on this distribution channel are rare in domestic literature.

6.2 Indirect distribution channels of organic food:

Indirect distribution channels of organic food in Croatia are:

(1) Wholesale
(2) Retail

Biovega is the leading distributor of organic food in Croatia. This company distributes domestic organic food (wheat products, barley, rye, corn, fresh fruit, vegetables and processed products). The company has signed cooperation agreements with domestic producers of organic food.

Biovega guarantees purchase and payment. Cooperation between Biovega and domestic producers began with the producers from Bjelovarsko-bilogorska County and producers from other counties joined later.

The company offers organic food in its own specialized bio&bio shops, but also through supermarket chains (Konzum - EKOZONA), and some of the products are exported to foreign markets.

EKOZONA is Biovega's brand with an assortment of 108 products both packaged and fresh in 14 different categories. Attention has been paid to choosing the product categories for which it is convenient to replace conventional products with organic ones. Pretti has been a distributor of organic food for 20 years already. The assortment includes more than 400 products (organic juices, drinks, cereal desserts, cereals, food supplements, spices, sweets, gluten free products, spreads and pasta). The company is a distributor of the following brands: Biotta, Lima, Vivani, Natur Compagnie, Dr. Schaer and Granovita.

The products are distributed through specialized bio&bio shops, organic food supermarkets (Garden), pharmacies and supermarket chains (Konzum, Plodine, Tommy, Billa, Spar, Metro, Getro, Kaufland, Diona, Brodokomerc Nova).

Organic food retail includes supermarkets and hypermarkets, specialized health food shops and, as a recent type of retail in the Croatian market, organic supermarkets. Generally speaking, supermarket chains show different levels of interest for organic food. Their motives to enter the organic food market differ and they use various strategies when selling organic food.

The role of supermarkets as distribution channels is becoming more important and through their offer of organic food they can be described as those who take care of consumers' health. The main distribution channels of organic processed products in the City of Zagreb and Zagreb County are supermarkets. This can be proved by checking the Register of organic food importers in which the following supermarket chains are listed: Spar, Kaufland Croatia, and Lidl Croatia.

In Croatia, supermarket chains devote more and more shelf-space to organic food. Distribution of organic food through supermarkets requires assured supplies, homogeneous quality and large volumes. This poses a problem, not only for specific organic products which are produced in small quantities (very often it is the case with small producers), but also for processed organic products because of potential bottlenecks at different stages of processing.

Therefore, in order to ensure sufficient quantities and a continuous supply, supermarkets very often import organic food. The company 'DM' has an assortment of more than 200 products of certified organic food producer Alnatura, and also offers organic food produced by domestic producers: the Sever family farm and Hladnić Oil Mill.

Supermarket Konzum (http://www.konzum.hr/) is the largest Croatian retail chain with a share of around 30% on the Croatian market. The majority is owned by the company Agrokor. It employs more than 12,700 people, and has more than 700 stores in Croatia. It has a wide assortment of organic food from different organic food producers such as: Ekozona, Alpro, Bio plod, Bioambra, etc.

The Agrokor Group (http://www.agrokor.hr/336.aspx), which is also the largest shareholder in the **Konzum retail chain,** is the largest private company in Croatia and one of the leading regional companies with consolidated total revenues of more than HRK 35,5bn in 2015 and employing more than 40,000 people.

The Agrokor Group's core businesses are the production and distribution of food and drink on the one hand and retail on the other.

Supermarket chain Tommy (http://tommy.hr/) was founded in 1992, when it started with activities in wholesale and retail. Today, Tommy is one of the leading Croatian retail chains, the largest company and the largest employer in Dalmatia and southern Croatia. Tommy is one of the top-40 Croatian companies in total revenue, and is among the 20 largest privately owned companies. The Tommy retail chain currently consists of 184 stores, which are spread all over the country in several counties, with a specific concentration in four Dalmatian Counties. Tommy's market shares in the Croatian retail industry have been increasing steadily each year.

Foreign investment from companies such as Rewe (Billa), as well as the entry of other foreign players, such as German retailers Billa and Kaufland and the Italian companies Mercatone and Intercoop, has further stimulated competition.

Germany's Lidl (http://www.lidl.hr/cps/rde/xchg/lidl_hr/hs.xsl/index.htm) entered Croatia in late 2006, opening 13 stores across the country (including three in Zagreb), having already invested over € 40mn. The company is targeting the opening of up to 100 stores in the country in the coming few years.

Metro Cash & Carry (http://www.metro-cc.hr/eng/html/index_en.htm) has a network of five stores in Croatia. Presently, it is the third most successful retailer in Croatia.

SPAR Croatia Ltd. (http://www.spar.hr/hr_HR.html) was founded by SPAR Austria Group in 2001 and is the youngest company within the group. SPAR Austria is part of a large group of independent SPAR companies, that operate under the SPAR brand. According to their business plan, SPAR rapidly expanded, and today independent SPAR companies operate in 35 countries on 5 continents, and their number is constantly growing. After approval by the Agency for Protection of Competition, Spar Croatia took over the management of Hypercoop hypermarkets on 01.05.2009. They provide a diversified range of organic products.

The most prominent distributor supplying the foodservice channel is ***Metro***, commanding a 70% share of sales, according to the Croatian trade press. Podravka dd, Atlantic Grupa dd and Coca-Cola Beverages Hrvatska doo are the only manufacturers to show substantial movement towards this channel, sharing the remaining 30%. Podravka dd, one of the domestic packaged food leaders used its own substantial amount of distribution facilities to deliver its products to foodservice outlets.

In DM shops, organic food is offered on separate shelves and is separated from other products. Their assortment includes more than 2,000 products of certified producers, both domestic and foreign brands. Competition in the area of organic food is getting stiffer, which can be proved by a new retail format on the Croatian market – the organic food supermarket.

Organic food supermarkets are the fastest developing distribution channel and they have gained market share.

Gardens supermarket was opened in 2008 (at present, there are three supermarkets in Zagreb) and what makes it different from other specialized organic food shops (especially bio&bio shops which offer products of plant origin) is its offer of organic food of animal origin (e. g. San Daniele ham).

At present, there are more than 3,300 products on offer, and the offer is based on the following brands: Ecor, Sonnentor, Schedel, Andechser Natur, Hollinger and Herbaria.

Forty percent of the organic products on offer is produced domestically and the plan is to further expand cooperation with domestic producers.

6.3 Emerging distribution channels of organic food:

Emerging distribution channels include Ho.Re.Ca (hotels-restaurants-cafés) and public institutions (canteens, schools, hospitals, and army), as well as the distribution of organic food via organic agro tourism.

7 Key sector institutions

Agricultural Advisory Service:

www.savjetodavna.hr

The Advisory Service is a specialized public institution of advisory activity in agriculture, rural development, fisheries, and forest management for the forest owners and operates, through a central office in Zagreb and subsidiaries in the local (regional) self-government.

The core business of the Advisory Service is transmission of knowledge and information in agriculture, and linking stakeholders in development of rural areas as key factors in the development, growth, competitiveness and sustainability of agriculture.

It is an undeniable fact that the Advisory Service, after Croatia entered the EU, has a key role in the implementation of rural development, and the dynamics and scope of the use of financial resources of the Fund for Rural Development of the European Union (EAFRD).

The Cooperative Bio Agri Cert (ABC) implements professional control and certification in the area of organic production in accordance with the provisions of the organic production and labeling of organic products (NN RH No.. 139/2010) and related regulations with the assigned code number EN-ECO-03.

Zadruga Agri Biocert (certification):

www.agribiocert.hr

Croatia follows the EU directives and regulations just like any other member of the EU. In 2007 the European Council of Agricultural Ministers agreed on a new Council Regulation Council Regulation (EC) No 834/2007 setting out the principles, aims and overarching rules of organic production and defining how organic product were to be labelled. These rules apply the same way in the Republic of Croatia as they do in all other countries that are part of the European Union.

- As agriculture (primary production) and food processing are two interrelated segments of the food industry, they both fall under the auspices of the Ministry of Agriculture:

Ministry of Agriculture
Ulica grada Vukovara 78,
10000 Zagreb
tel: +385 1 6106 111
fax: +385 1 6109 201
web:http://www.mps.hr
E-mail:office@mps.hr

- Although the regulative and support systems of food processing are coordinated in the Ministry of Agriculture, the industry as a whole is horizontally coordinated by the Ministry of Economy. This ministry is responsible for the development, implementation and coordination of national industrial policy.

Ministry of Economy
Ulica grada Vukovara 78
10 000 Zagreb
Office for European and International Affairs
Ph.D. Ivana Zerec
Head of the Office for European and International Affairs
ivana.zerec@mingo.hr

- Another ministry involved with the food sector, specifically with food safety, is the Ministry of Health, whose task it is to adopt, align, enforce and interpret legislation under the Food Act.

Ministry of Health
Ksaver 200a, Zagreb 10000
Phone: + 385 1 4607-555
Fax: + 385 1 4677-076

- The Croatian Food Agency (HAH), a government-appointed authority operating within the Ministry of Agriculture, was established by the Food Act (Official Gazette No 46/07). It is responsible for risk assessment and for providing scientific advice and technical support to the Ministry of Agriculture.
  It also provides information, advice and education to all stakeholders in the food chain.

CROATIAN FOOD AGENCY
I. Gundulića 36b, 31 000 Osijek, Croatia
Tel: +385(0)31/214-900
+385(0)31/227 600
fax: +385(0)31/214-901
Email: info@hah.hr
Web : www.hah.hr

- Ultimately, the entity responsible for the implementation of policy instruments related to agriculture, fisheries and food processing is the Paying Agency for Agriculture, Fisheries and Rural Development.

PAYING AGENCY FOR AGRICUTLURE, FISHERIES AND RURAL DEVELOPMENT
(www.apprrr.hr)
Address: Ulica grada Vukovara 269d/ 4th floor, 10000 ZAGREB, CROATIA;
Tel: (+385 1) 6002-700
Fax: (+385 1) 6002 851
E-mail: info@apprrr.hr

In the meantime, here are some links that can inform you more about Croatian institutions, agencies and laws:

- Some essential information about the declarations of products, unfortunately the website is written entirely in the Croatian language.
  Web: http://www.deklaracije.net/

- The Croatian Chamber of Economy is an independent professional and business organization of all legal entities engaging in business. It was established in 1852 and every company registered with the Commercial Court is a member of the Chamber.

Croatian Chamber of economy :
Address: Rooseveltov trg 2, 10000 Zagreb
Phone: +385 1 4561555
Fax: +385 1 4828380
E-mail: hgk@hgk.hr
Web : http://web.hgk.hr/english/

- The Customs Administration is an administrative organization within the Ministry of Finance.

http://web.hgk.hr/english/

Ministry of Finance, Customs Administration
Katančićeva 5
10 000 Zagreb
Croatia
Telephone: ++385 1 4591 333
Fax: ++385 1 4922 583
Web : http://www.mfin.hr/en/

http://web.hgk.hr/english/

- The Bureau of Quality Testing is the oldest Croatian company that exclusively provides services of quality control and safety of goods, products and services. It was founded in 1957 in Zagreb, based on a decision issued by the City Assembly.

Bureau of Quality Testing
Address: Zagreb, Ljudevita Gaja, 10000 17/III
(Show map)
Tel : +385 1 4806 777
Fax +385 1 4806 700
E-mail: info@zik.hr
Web: http://zik.hr/en/

- The European Food Safety Authority (EFSA) is the keystone of the European Union's (EU) risk assessment regarding food and feed safety. In close collaboration with national authorities and in open consultation with its stakeholders, EFSA provides independent scientific advice and clear communication on existing and emerging risks.

EFSA also cooperates with Croatia
Web:
http://www.efsa.europa.eu/en/events/event/151014.htm

Croatian laws and regulations can be found (in Croatian) at: www.nn.hr and http://www.hah.hr/zakonska.php.
An English translation of some of the legislation can be found at: http://www.mvep.hr/hr/hrvatska-i-europska-unija/hrvatska-i-europska-unija0/prijevodi-pravnih-propisarepublike-hrvatske/.

- Zakon.hr – An internet project aimed at gathering all Croatian law, revising texts, sorting them and connecting them with relevant sources of information.
  Web: http://www.zakon.hr/z/467/zakon-o-hrani

- The EU has one of the highest food safety standards in the world – largely thanks to the solid set of EU legislation in place, which ensures that food is safe for consumers. A key tool to ensure the cross-border follow-up of information to swiftly react when risks to public health are detected in the food chain is **RASFF – the Rapid Alert System for Food and Feed**.

  Web: http://ec.europa.eu/food/safety/rasff/index_en.htm

8 SWOT Analysis

Given its geographical location, proximity to developed central and western European countries, i.e. the market where organic products are highly demanded, a market for organic products would be secured. Another favorable factor for the organic food sector in Croatia is the intensive development of tourism, which means that most of the products could be sold directly on the domestic market.

STRENGHTS	WEAKNESSES
- Favorable geographic conditions for organic farming in Croatia. - Consumers perceiving health effects of organic food. - Continuous growth of the Croatian organic food market. - Improving overall tourism. - Consumers preference to buy local organic food than imported one.	- Low satisfaction with the organic food offered on the market. - Great number of farms are not capable of producing large quantities of organic food. - High prices as a motive for refusal of organic food purchase.
OPPORTUNITIES	THREATS
- Improvement of networking between producers, industries, research centers. - Plans to further expand cooperation between domestic producers. - Agro-tourism. - Development of new technology. - Use of EU funds. - Market development and branding. - Eco agriculture.	- Stiffer competition in the area of organic food. - Lack of investment in this branch of agriculture. - Setting of high modern requirements. - Competition from EU countries'

Link of organic operators 2015 with certificates
http://www.mps.hr/default.aspx?id=17742