BIOREPORT 2012

Organic farming in Italy

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BIOREPORT 2012

ORGANIC FARMING IN ITALY

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Presentation

Now in its second edition, BIOREPORT continues in its efforts to improve awareness of the Italian organic sector, in its various facets. The 2012 edition focuses on contrasting aspects and problems of the sector, to be dealt in the future through coherent policies at regional, national and EU levels, also because of the similarity of Italy's situation with that of other European countries.

The Italian organic sector has in fact significant growth opportunities in terms of supply, given the increase in demand that has continued for more than six years. However, organic surface has been substantially stationary for about ten years, while the number of organic farms, especially smaller ones, continues to shrink. According to the latest general agriculture census, average UAA on Italian organic farms is 18 hectares, compared with 7.9 of the average UAA of all farms surveyed. As noted by the FADN, this contributes to a higher average profitability for organic farms compared to conventional ones, though the former have lower production intensity than the latter. The growing domestic demand, therefore, is also satisfied by increased imports, as reported by the data related only to imports from countries not in the equivalence scheme in 2007-2011.

The consumption of fertilisers allowed in organic farming indicates that the sector can trigger sustainable processes throughout agriculture. With organic surface substantially unchanged, in fact, the continuous increase of fertiliser consumption is mainly due to their greater use by conventional farms, thus helping to reduce the overall negative impact on the environment by the agricultural sector. The increase of the quantity of feed distributed, however, is related to the increase in the number of organic livestock farms, though the level of farms' self-supply remains high. As feed and seeds have a number of problems with regard to quality, availability and cost, that growth should lead to a greater focus by institutions for appropriate regulatory action.

On the other hand, in the proposed CAP reform, the EU is keen to promote organic farming, in both the first and the second pillar, exempting farms from greening and providing a specific measure of support for organic farms. Pending proposals becoming operational, the need must be underlined for greater coherence between EU decisions, for example allowing Member States to decide on GMO cultivation, the reason for the withdrawal of a number of certifications of organic corn in countries where these crops are allowed, as in Spain.

Also with regard to national and regional policies greater incisiveness is called for, establishing clear objectives for the sector and trying to make good use of the limited financial resources available. Examples of this abound, both among European countries, and at the national level, where Emilia-Romagna proved to be one of the most virtuous regions in Italy for the support given to organic farming on many fronts, making best use of all the tools and resources available to develop the sector.

To disseminate positive experiences that can be replicated in other contexts, a chapter of this year's BIOREPORT is devoted to the analysis of policies for organic farming carried out by a specific Italian region. With the same objective, in 2013, a chapter will be devoted to the examination of a European country that stands for policies to support organic farming.

As with the last edition, more specific topics provide data and information on some branches of organic. Pasta, cosmetics, detergents and wine - just regulated at the European level - are analysed to illustrate the characteristics and peculiarities of their supply chains, and trace the profiles of production and the market, highlighting in particular the need to establish Community regulation for cosmetics and detergents, to reassure the consumer and differentiate organic products from those indicated by misleading labels and advertising.

BIOREPORT does not claim to be exhaustive with respect

to the complexity of organic production and its many problems. However, it aims to help the potential reader - in particular operators, institutions and researchers - to find information on organic farming and hopes, at least in part, to fill the gaps of knowledge about specific issues. It also aims to provide an overall framework, from which contradictions and weaknesses emerge, on which to base possible measures by policy makers for the development of the sector.

The Coordinating Committee

PART I:
OVERALL DATA ON ORGANIC FARMING

1. The structural situation of farms

The international context

The overall distribution of organic farming in the world is fairly stable, after continuous growth in recent years. International data for comparison are those published in the last annual FiBL-IFOAM report: they refer to 2010 and do not reveal significant changes from the previous year . The total area affected is around 37 million hectares, 83% of which is concentrated in Oceania, Europe and Latin America. Italy remains among the top ten countries in the world for organically cultivated area and, among these, is the one with the highest percentage to total UAA.

Our country is also among the top ten in the world and first in Europe for the number of producers, as well as certified operators in general (including processors and importers).
Eurostat has recently issued figures for 2011 on the development of organic farming in European countries. France has increased by about 15%, for both the number of operators and area; positive values, although smaller, also apply to Germany. Spain, with an increase of 12% compared to 2010, recorded an area of 1.85 million hectares, ranking top in Europe, and also shows a significant increase in the number of operators (+18%).

Tab.1 - Top ten countries in the world for surface planted using organic methods, 2010

	Organic surface	Organic surface/ total UAA
	ha	%
World	37,041,005	0.8
Australia	12,001,724	2.9
Argentina	4,177,653	3.0
United States of America	1,948,946	0.6
Brazil	1,765,793	0.7
Spain	1,456,672	5.9
China	1,390,000	0.3
Italy	1,113,742	8.7
Germany	990,702	5.9
Uruguay	930,965	6.3
France	845,442	3.1

Source: FIBL-IFOAM 2012

Tab. 2 - Top ten countries in the world by number of organic farms, 2010

	Number of organic farms
World	1,578,407
India	400,551
Uganda	188,625
Mexico*	128,862
Ethiopia	123,062
Tanzania*	85,366
Peru	44,827
Turkey	43,096
Italy	41,807
Spain	27,877
Mali	27,711
France	845,442

** Latest figures refer to 2008.*
Source: FIBL-IFOAM (2012).

[1] *FiBL – IFOAM. The world of organic agriculture. Statistics and emerging trends 2012.*
[2] *For figures and analysis of the international context, see Bioreport 2011, pp. 11-14.*

Organic farming in Italy

SINAB produces an annual report, *Bio in cifre* (Organic in figures), with which MiPAAF issues official data on organic farming in Italy as of December 31 of the previous year, collected from monitoring agencies. This data gives the number of certified operators broken down by type, hectares of cultivated area divided by crop type, amount of livestock, aquaculture and processing activities.

The figures for 2010 and 2011 show that organic has responded well to negative developments in the primary sector in general, in many cases represents a valid alternative for farms, probably a function of a more sub-

Tab. 3 - Organic operators by type and region (n.), 2010 and 2011

	A Exclusive producers		B Exclusive preparers		C Exclusive importers		AB Producers / Preparers		TOTAL OPERATORS	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
Piedmont	1,369	1,323	376	396	8	3	179	231	1,946	1,977
Valle d'Aosta	67	69	12	11	0	0	2	6	81	86
Lombardy	680	700	543	642	4	4	95	126	1,353	1,506
Liguria	232	210	104	111	5	1	47	56	396	389
Trentino A. A.	966	1,009	248	294	4	4	141	145	1,364	1,459
Veneto	951	932	549	640	8	12	124	194	1,665	1,811
Friuli V.G.	262	268	94	119	1	0	30	40	390	432
Emilia R.	2,465	2,465	772	816	10	10	244	266	3,540	3,602
Tuscany	2,190	2,278	479	499	2	10	559	728	3,252	3,536
Umbria	977	942	116	145	0	2	222	223	1,321	1,318
Marche	1,783	1,758	187	228	1	0	121	133	2,097	2,127
Lazio	2,490	2,461	320	366	1	1	154	168	2,969	3,001
Abruzzo	1,275	1,263	176	200	0	3	126	143	1,580	1,612
Molise	137	177	38	36	0	1	15	16	192	232
Campania	1,350	1,475	272	288	0	0	120	128	1,751	1,896
Puglia	4,501	4,166	454	464	0	6	356	441	5,319	5,081
Basilicata	1,256	1,178	82	98	0	1	63	71	1,402	1,348
Calabria	6,234	6,471	222	214	0	1	289	425	6,749	7,115
Sicily	7,632	6,636	482	526	0	2	184	295	8,311	7,469
Sardinia	1,862	2,124	66	72	0	2	57	71	1,985	2,272
Total	**38,679**	**37,905**	**5,592**	**6,165**	**44**	**63**	**3,128**	**3,906**	**47,663**	**48,269**

Source: SINAB.

Tab. 4 - Organic surface by type of crop (ha),2010 and 2011

	Surface under conversion		Organic surface		TOTAL	
	2010		2010		2010	2011
Cereals	46,630	35,654	148,344	148,456	148,344	184,111
Protein crops, legumes, feed	3,940	3,867	21,679	17,577	21,679	21,445
Root crops	489	393	1,207	1,445	1,207	1,838
Industrial crops	1,957	1,899	12,907	14,126	12,907	16,024
Fodder crops	49,980	50,567	141,811	200,016	191,791	250,583
Other arable crops	1,633	2,239	4,350	8,314	5,983	10,553
Vegetables	6,018	4,464	21,903	18,942	27,920	23,405
Fruit	5,945	6,011	16,251	17,226	22,196	23,237
Nuts	7,762	6,949	19,726	20,890	27,488	27,839
Citrus	7,572	6,097	15,853	15,843	23,424	21,940
Vines	21,931	18,735	30,341	34,077	52,273	52,812
Olives	44,171	41,980	96,577	99,588	140,748	141,568
Other permanent crops	9,566	776	42,733	6,768	52,299	7,543
Grasslands and pastures (excluding poor pastures)	44,568	40,408	145,296	141,652	189,864	182,060
Poor pastures	26,218	29,987	72,479	63,544	98,698	93,531
Fallow land	13,441	9,756	30,463	28,644	43,904	38,400
Other categories not included in total [1]	-	*4,886*	-	*10,082*	-	*14,968*
Total crops	**291,821**	**259,782**	***821,921***	***837,107***	***821,921***	***1,096,889***

[1] *Forest surface and volunteer harvest surface (wild mushrooms, truffles, wild berries); other.*

Source: SINAB.

stantial farm income that has produced greater vitality in the sector.

With regard to specific dynamics, it appears that in 2010 there were 47,663 certified operators, a decrease of 1.7% compared to 2009, and 48,269 in 2011 with a recovery of 1.3 percentage points over the previous year.

The distribution of operators in Italy in the period, among regions with the largest number of organic farms, is led by Sicily, followed by Calabria, in line with previous years, while the leader in number of processors was Emilia-Romagna, followed by Veneto and Lombardy.

Area affected, under conversion or for which conversion is already complete, amounted to 1,113,742 hectares in 2010, basically stable over the previous year (+0.6%) and 1,096,889 hectares in 2011, a decrease of 1.5%. The main types of production are cereals, fodder, pastures and olive growing.

For livestock production, distinguished on the basis of main species raised, the data show a significant increase in 2011 in the number of head for pigs, sheep, goats and poultry.

Tab. 5 - Head of livestock raised using organic methods by type of animal (n.)

Type of livestock	Head					% Change 2011/2010
	2007	2008	2009	2010	2011	
Cattle	244.156	216.476	185.513	*207.015*	*193.675*	*-6*
Pigs	26.898	34.014	25.961	*29.411*	*32.436*	*10*
Sheep	859.980	1.007.605	658.709	*676.510*	*705.785*	*4*
Goats	93.876	83.411	74.500	*71.363*	*72.344*	*1*
Poultry	1.339.415	2.157.201	2.399.885	*2.518.830*	*2.813.852*	*12*
Horses	8.325	9.903	8.597	*9.563*	*9.548*	*0*
Bees (number of hives)	112.812	102.280	103.216	*113.932*	*99.260*	*-13*
Other animals	1.926	2.501	2.948	*2.089*	*1.751*	*-16*

Source: SINAB.

Data on the number of certified organic farms operating with livestock, exclusively or in conjunction with crops or processing are derived from the SIAN database, on the basis of lists submitted by authorised inspection bodies. They number 7,355 farms in 2010, with an overall increase of 13.1% compared to 2009 and 6,884 farms in 2011 with a decline of 6.4% over the previous year.
Ultimately, the data from the last two years show substantial stability in the diffusion of organic farming in Italy.
With regard to type of operators, there was a drop in the number of producers, offset however by a significant increase in producers who also process (producers/preparers), signalling an attempt by agricultural enterprises to secure greater value for organic products. This element is indicative of the specificity of multi-functionality for the organic sector and also the action that consumers are making in choosing and, as much as possible, shortening the supply chain.

Imports

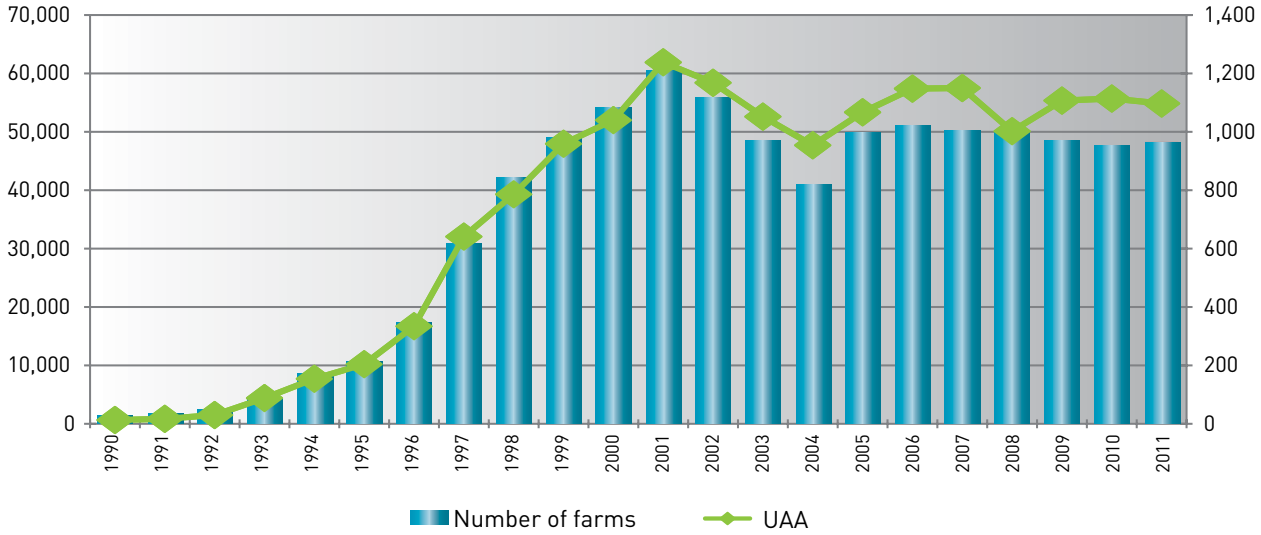
Analysis of the data processed by SINAB on imports of organic products from Non-EU countries shows a sharp increase for the years 2010-2011 in the total amount of imported product, by about 49% between 2009 and 2010 and 61% from 2010 to 2011.
The comparison between 2010 and 2009 shows an increase in import volume for cereals of more than 19,800 tons, in particular from non-EU European countries (significant imports of corn and barley come from Moldova). Volumes of rice purchased from Asian countries were

Tab. 6 - Trend in number of organic producers in Italy (n.)

	2007	2008	2009	2010	2011
Organic producers	45,390	44,563	43,236	41,825	41,816
of which exclusive producers	43,159	42,037	40,462	38,679	37,905
of which producers/preparers	2,065	2,324	2,564	3,128	3,096

Source: SINAB.

Graph. 1 - Trend in number of operators and organic surface in Italy (n.; '000 ha)



Source: SINAB.

halved; on the other hand there was an increase for both durum and soft wheat from Kazakhstan. There were also increased imports from North America, particularly of Canadian wheat. In 2011, the imported volume of corn has more than doubled and comes almost entirely from non-EU European countries.

For industrial crops, there was a strong rise in imported volume of sunflowers and soybeans, a substantial stability for flax and a sharp drop for rape, which continued the decline that began in 2009. Soybeans, sunflowers and rapeseed, used mostly in animal feed, come from non-EU European countries, particularly from Moldova.

Tab. 7 - Imports of organic products by category (t)

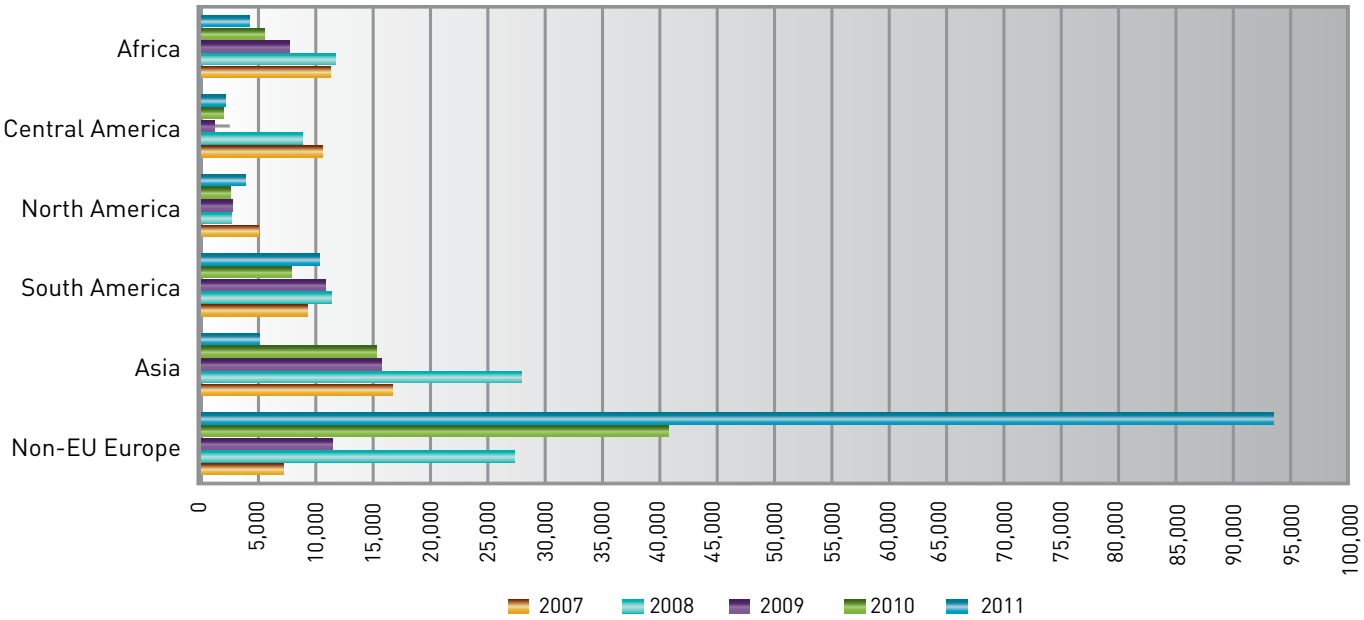
	2007	2008	2009	2010	2011
Cereals	21,831.55	44,378.04	23,269.28	43,142.19	50,697.16
Industrial crops	3,265.20	8,811.54	426.4	9,437.13	45,832.20
Fresh and dried fruit and nuts	8,339.55	8,813.97	7,245.16	3,479.38	5,558.62
Natural extracts, aromatics and condiments	135.32	240.53	139.11	701.42	1,041.66
Vegetables	10,083.04	9,435.70	8,165.34	7,639.65	5,303.58
Processed	16,299.39	18,179.34	10,264.26	9,502.90	10,558.36
Aquaculture	-	-	-	-	2.07
Total	**59,954.05**	**89,859.12**	**49,509.55**	**73,902.67**	**118,993.65**

Source: SINAB.

Natural extracts, aromatics and condiments were up for all geographical areas of origin.
Vegetables in 2010 remained slightly lower than in 2009 (there were increases for peas from Moldova), and continued to decline in 2011.
In the two-year period, processed products showed constant growth rates; note that movements of olive oil are not recorded, probably because of entry into the system of equivalence of third-country producers.

In conclusion, the geographical origin of organic products imported from third countries not in the equivalency scheme translates into a prevalence of vegetables from Africa, processed products from South America, cereals from non-EU European countries and North America, fresh and dried fruit and nuts from non-EU Europe and South America, and industrial crops from non-EU Europe.

Graph. 2 - Volumes of organic product imported to Italy by geographical area of origin (tonnes)



Source: SINAB.

2. The economic situation of farms

The Italian FADN 2010 surveyed a total sample of 10,973 farms, including 749 farms in the national registry of organic farms. Most of these (78%) are located in the Central and South of the peninsula, and are devoted mainly to specialised permanent crops or non-specialised production (mixed crops and livestock), particularly common among organic farms because they conform to organic regulations regarding rotations, organic fertilisation and the presence of improvement crops.

The Farm Accountancy Data Network (FADN) is a Community tool designed to monitor the economic situation of farms in Europe. In Italy, the FADN provides annual

Tab. 1 - Structural comparison of organic and conventional FADN farms, 2010

		Organic	Conventional
		average farm figures	
UAA	*ha*	54.8	34.9
LSU	*n.*	21.1	18.0
AWU	*n.*	2.3	1.7
Land capital	*euro*	624,720	420,298
		structural indicators	
UAA/TWU	*ha*	23.9	20.4
LSU/TWU	*n.*	9.2	10.5
LSU/UAA	*n.*	0.4	0.5
Land capital/UAA	*euro*	11,404	12,037

Source: INEA, FADN data bank (2012)

What is FADN?

The Farm Accountancy Data Network (FADN[1]) is a Community tool designed to monitor the economic situation of farms in Europe. In Italy, the FADN provides annual economic data of a representative sample of commercial farms, ie farms whose production is market-oriented, with economic size greater than 4,000 euro standard gross margin[2]. The presence of organic production units in FADN allows assessment of their economic profile, also with reference to conventional farms.

[1] *Detailed information on FADN available at www.rica.it.*
[2] *European Size Units (ESU: 1 ESU equals 1,200 euro).*

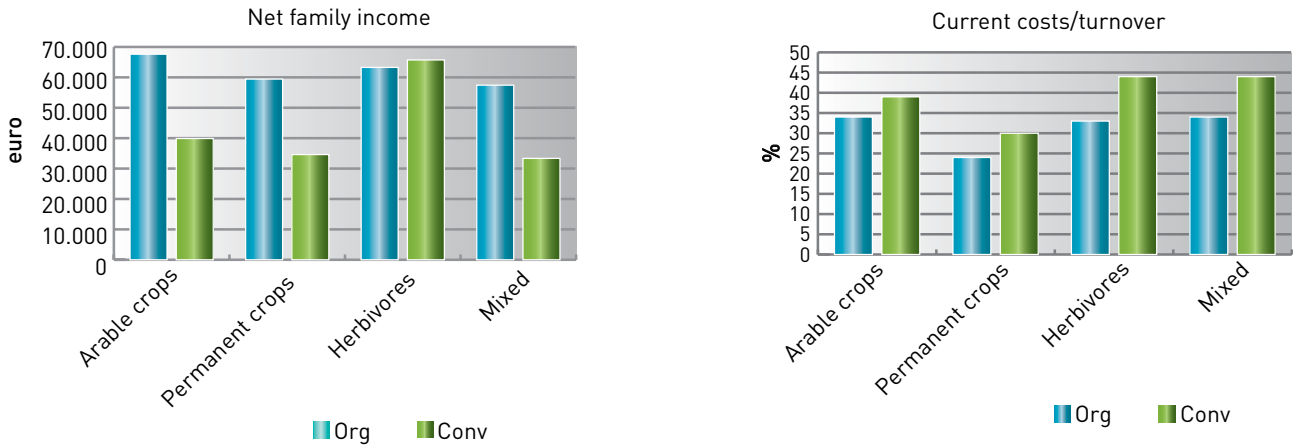
economic data of a representative sample of commercial farms, ie farms whose production is market-oriented, with economic size greater than 4,000 euro standard gross margin . The presence of organic production units in FADN allows assessment of their economic profile, also with reference to conventional farms.
In order to evaluate their structural profile and economic performance, the FADN sample of organic farms was compared with a sample of 5,906 conventional farms selected by FADN similar to the former based on size, farm type and geographical location.
The average agricultural area of organic farms in the FADN sample is higher than that of their conventional counterparts by about 20 hectares (55 hectares as against 35 for conventional farms). Organic farms under consideration also have higher average number of

Tab. 2 – Economic results of organic and conventional farms FADN (euro, 2010)

	Organic	% of Turnover	Conventional	% of Turnover
TO	125,143		99,703	
of which connected activities	5,251	*4*	1,679	*2*
Current costs	36,856	*29*	37,708	*38*
Value added	88,288	*71*	61,994	*62*
Long-term costs	11,527	*9*	8,705	*9*
Labour and passive rents	24,364	*19*	15,595	*16*
Operating income	52,396	*42*	37,695	*38*
Net family income	60,910	*49*	41,066	*41*

Source: INEA, FADN data bank (2012)

Graph. 1 – Economic results by main production type, 2010



Source: INEA, FADN data bank (2012)

livestock units (21 LSU per farm, as against 18 on conventional farms), which plays an important role in restoring the fertility of soils, as well as being a source of income. The larger physical size is also accompanied by an increased use of labour, registering an average of 2.3 annual work units, compared to 1.7 annual work units on conventional farms. Furthermore, in relation to the greater physical size of organic farms, there is an average land asset of about 625,000 euro compared to a value of 420,000 euro for conventional farms.

Another feature of organic farms in the sample is that they have lower production intensity than conventional farms, as evidenced by the greater availability of utilised agricultural area per unit of labour (23.9 hectares versus 10.4 hectares on conventional farms), and lower livestock density in relation to livestock units per work unit (9.2 LSU for organic compared to 10.5 for conventional). The lower value of land assets per hectare of agricultural land (11,404 euro for organic and 12,037 euro for conventional) is generally correlated with more extensive farming methods.

An examination of the economic performance of FADN organic farms revealed that the organic method may represent a viable alternative to the conventional system. First, the total output is on average 125,143 euro, higher than the 99,703 euro recorded for conventional farms. It is also interesting to note that organic farm revenues from related activities (farm stays, subcontracting, rental income, etc.) contribute to 4% of TO, twice the value of the corresponding index for conventional farms, signalling greater propensity of the former to differentiate their activity.

Tab. 3 - Productivity and profitability of land and labour (euro), 2010

	Organic	Conventional	% Change
TO / UAA	2,284	2,856	-25.0
TO / AWU	54,622	58,125	-6.4
Current costs / UAA	673	1,080	-60.5
Long-term costs / UAA	210	249	-18.5
Net family income / UAA	1,112	1,176	-5.8
Net family income / AWU	26,586	23,941	9.9
Net family income / TO	49	41	15.4

Source: INEA, FADN data bank.

The value added [3] of organic farms in FADN represents more than 70% of TO, compared with 62% for conventional farms. The better result of organic farms is achieved thanks to containment of current costs (inputs, services provided by third parties and other direct costs), the main item of farm expense. On organic farms, current costs make up less than 30% of TO (38% on conventional farms), indicating adoption of less intensive production processes, which use fewer means of production off the farm. On the contrary, organic farms record higher labour costs, determined by the greater labour intensity required by production techniques, and for passive rents. Also in terms of profitability, organic farms produce better results than the conventional farms surveyed. Net in-

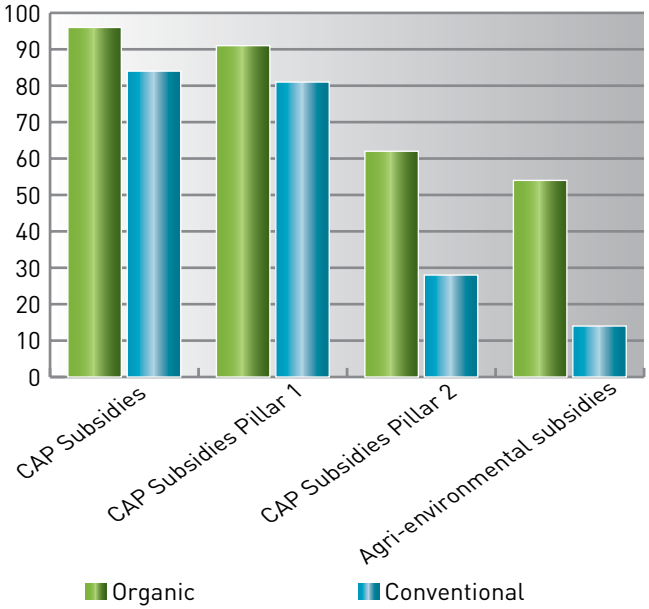
[3] *Value added is the difference between total output and current costs.*

come, meaning the remuneration of all factors brought to bear by the entrepreneur, is nearly 61,000 euro per farm, constituting almost half of the TO (49%), far higher than the approximately 41,000 euro obtained on conventional farms, representing only 41% of the TO. However, one should consider that income also includes Community subsidies and, in particular, specific aid for the organic sector disbursed through the agri-environment measure. This aid affects the income of beneficiary farms by 15% compared to 11% for conventional farms.
The results are, however, linked to production systems, and thus vary according to crops and livestock. In general, the comparison by production type between the two methods shows that organic farms get the best results. More specifically, the analysis by production type shows that organic farms produce the best performance for arable crops and the worst results, in terms of average net income, for organic livestock (herbivores) compared to conventionally raised livestock, a sign that the containment of production costs is not sufficient to make the organic production method competitive in this category.
The extensive nature of organic production technique is made clear from the analysis of indices of productivity and profitability of land: both the value of production and income per unit area are significantly lower than the values of the same indices calculated for conventional farms. Lower values were also recorded for the productivity of labour, but the profit performance per unit of labour remains favourable for organic farms.

Public support for FADN organic farms

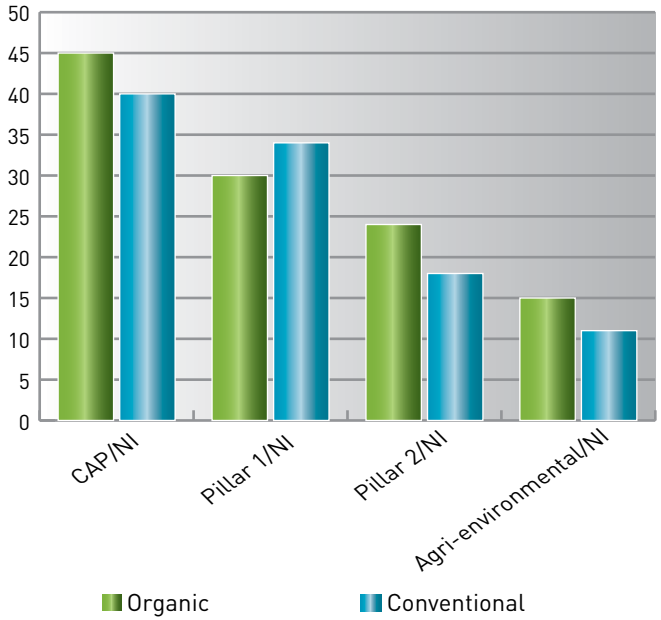
Public support plays an important role in farms' economic results, representing a significant source of income for farmers, as is also shown by the information available from FADN. Reading the data, it is clear that the majority of farms in the two subsamples considered (organic and conventional) receive an entitlement from the Common Agricultural Policy (CAP) which accounts on average for 45% of net income on organic farms and 40% on conventional ones. However, the share of aid shows variability in relation to production types practiced. Thus, in both production systems, the share of CAP subsidies to net income is higher on farms growing arable crops (59% on organic and 65% on conventional farms), the largest EU support received by this production sector.
The observation of the data on the breakdown of subsidies shows that the support for CAP markets (Pillar 1) for both production systems constitutes the bulk of total support, although it has a lower impact on organic farms (65% as opposed to 81% of the total amount of aid to conventional farms). The greater share of Pillar 2 on organic farms compared to conventional is attributable to specific support for the organic sector, and to the increasing trend of organic farms to diversify their activities, which gives them access to a wider range of rural development

Graph. 2 – Farms that receive Community aid by type of subsidy received (%), 2010



Source: INEA, FADN data bank (2012).

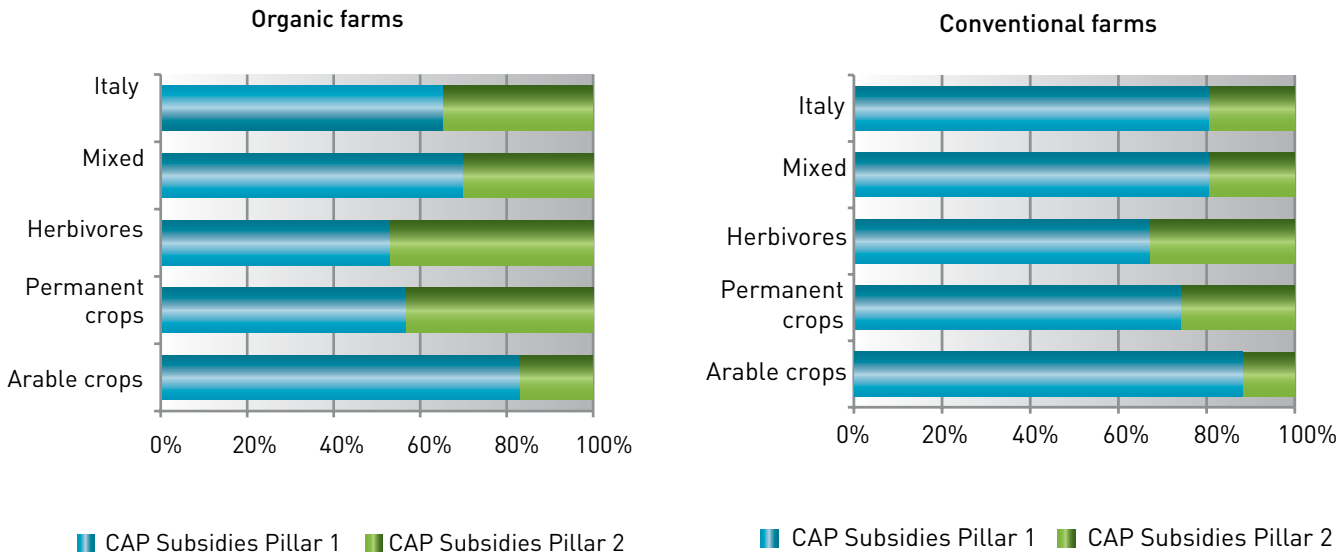
Graph. 3 - Share of Community subsidies to net farm income (%), 2010



Source: INEA, FADN data bank (2012).

measures compared to conventional farms.
The percentage of farms that receive entitlements under Pillar 1 is higher among organic farms (96% versus 84% for conventional), though this contribution is a higher share of income on conventional farms (34% against 30.5% for organic). With regard to Pillar 2, the number of farms that access payments for rural development is very prevalent in the organic subsample (62% versus 28% for conventional), a situation caused mainly by increased access to the agri-environment measure. Although this aid is an important support opportunity for farmers' income, only 54% of organic farms considered receive it. This is due both to the lack of financial resources available, which limits the number of applications approved, and the daunting bureaucratic complexity for access to the support. The level of payments, moreover, is not always considered to be sufficiently attractive. This contribution, in fact, is not an adequate incentive for all farmers considering the greater effort required by the organic production method.

Graph 4 - Breakdown of CAP subsidies between Pillar 1 and Pillar 2, 2010



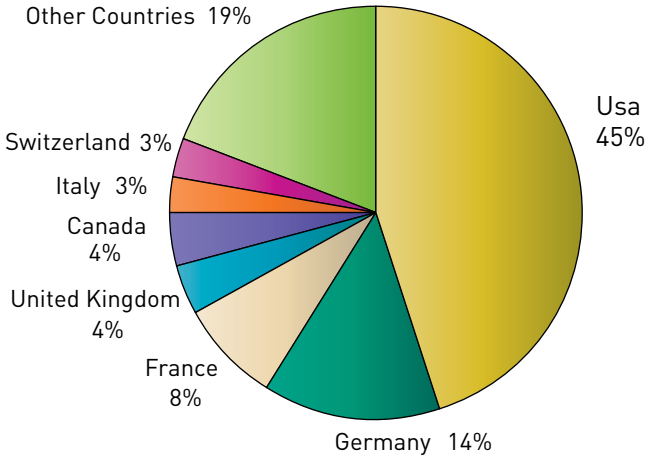
Source: INEA, FADN data bank (2012).

3. The market

In 2010, organic farming worldwide generated a turnover of 59.1 billion dollars (44.5 billion euro), an increase of 7.7% over 2009. 49% of this value occurs in North America, where the market continues to expand, with another 47% in Europe, where there is a slowdown in growth. The remaining 4% on the other continents is gradually developing on domestic markets.
The United States shows the greatest share of organic turnover (45%), followed at a large distance by Germany and France. Our country, despite being more distanced with a share of 3%, has a more favourable trend in the organic market than countries such as Germany, the UK, the USA and Switzerland.

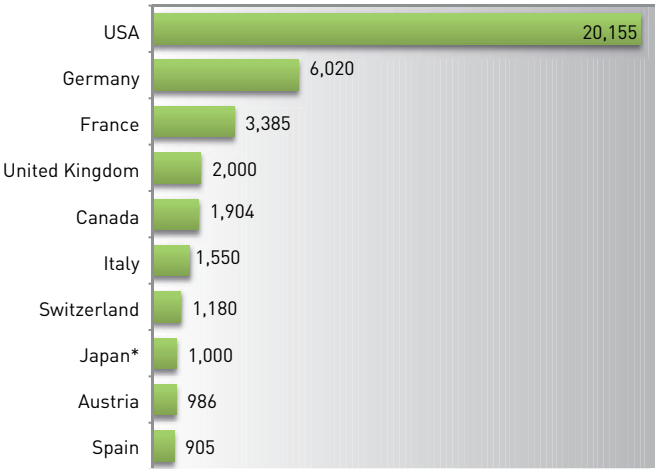
In Europe, sales of organic products amounted to about 19.6 billion euro in 2010, an increase of around 8% over the previous year: this continent has seven of the top ten countries in the world for market value. Moreover, the high number of brands makes Europe's organic market one of the most competitive in the world. While Germany, France, the UK and Italy, respectively, recorded much of the turnover, the highest European organic consumers are the Scandinavian countries, Austria and Switzerland. Italy, with a modest per capita spending of 25 euro, is not in the top of world and European rankings, where Switzerland and Denmark excel. Note that, in the latter country, the share of organic to total food sales reached 7%.

Graph. 1 - Major countries' share of the world organic market, 2010
(estimated total value 2010: 59.1 billion dollars)



Source: FIBL-IFOAM Report 2012.

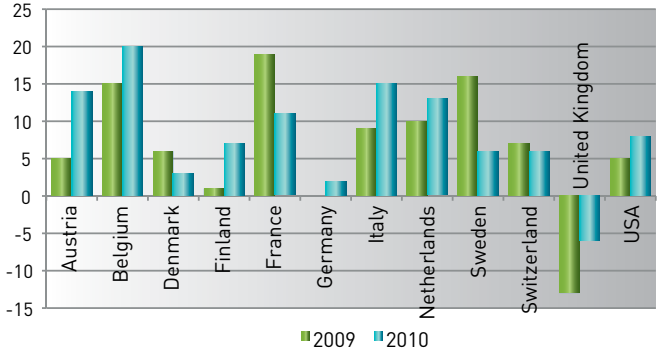
Graph. 2 - Organic sales in the world (million euro), 2010



** for 2009.*

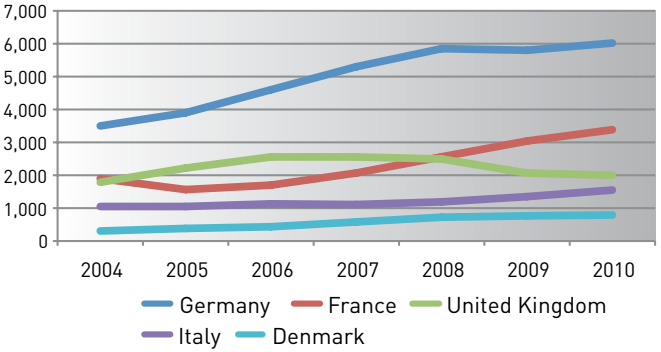
Source: FIBL-IFOAM Report 2012.

Graph. 3 - Trend in organic turnover for some countries (% change from previous year)



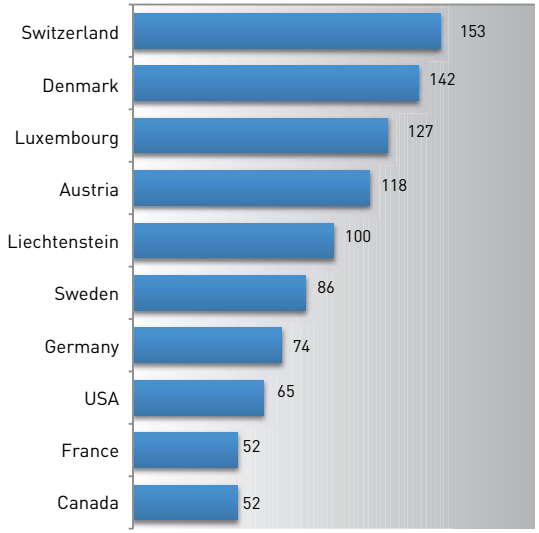
Source: "The European Market for Organic Food" presentation by Helga Willer, FIBL at Biofach 2012, Nuremberg.

Graph. 5 - Trend in organic turnover on domestic markets in some European countries (million euro)



Source: "The European Market for Organic Food" presentation by Helga Willer, FIBL at Biofach 2012, Nuremberg.

Graph. 4 - Top ten countries in the world for per capita organic spending (euro/year), 2010



Source: FIBL-IFOAM Report 2012.

The market for organic products in large-scale retail in Italy

The analysis of the sales of organic products in large-scale retail (GDO) for 2011 once again shows growth in purchases of packaged organic foods. Therefore, the six-year period of good performance for the organic sector continues.

According to data from the ISMEA/GFK-Eurisko Panel on families, in 2011 domestic purchases of packaged organic products in this channel grew 8.9%[1] in monetary terms, a significant increase in the course of a year marked by a worsening of the economic crisis.

There has been strong growth, in particular, for dairy products (+16.2%, particularly yogurt and butter), eggs (+21.4%) and biscuits, sweets, snacks and soft drinks (+16%). Much smaller increases were shown for fresh and processed fruit and vegetables (+3.4%), which remains the largest category of consumption; among the vast number of products in this category, purchases of jams and marmalades increased by 8.6% between 2010

[1] *Note that figures are available for only 87-90% of the total value of packaged organic products and do not include honey, homogenized products, industrial bread and other products.*

*Tab. 1 - Value of household purchases of packaged organic products, 2011**

Organic category	% Share to total 2011	% Change 2011/2010
Fresh and processed fruit and vegetables	**30,3**	**3,4**
of which:		
Jams and marmalades	8.2	8.6
Fruit juices	2.7	-11.4
Lettuce	1.9	31.7
Milk and dairy	**23.2**	**16.2**
of which:		
Yogurt	9.2	27.5
Milk and dairy	8.5	9.5
Butter	1.3	26.8
Eggs	13.6	21.4
Pasta, rice and bread substitutes	**8.1**	**-3.2**
of which:		
Bread substitutes	5.2	0.3
Pasta	2.4	-11.4
Whole-grain rice	0.3	-34.7
Biscuits, sweets and snacks	7.9	16.1
Sugar, coffee and tea	5.9	-3.4
Soft drinks	3.8	16.0
Meats and prepared meats	2.1	-8.2
Oils	1.7	-18.6
Ready-to-eat first courses	0.5	-28.9
Other organic products	2.8	73.3
Total packaged organic products*	**100.0**	**8.9**

** Figures cover approximately 87-90% of total value of packaged organic products.*
Source: ISMEA, GFK-Eurisko Panel on Families.

and 2011, while at the same time fruit juices showed a decrease of 11.4%. Finally, among fresh produce, lettuce exhibited a significant increase (+31.7%).
However, the category that includes pasta was down (consistent with what occurred in the conventional sector), along with brown rice and bread substitutes, with large declines for the first two and substantial stability for the latter product.
Declining significantly, but with a low share of the total, are meat and prepared meats, oils and ready-to-eat pasta dishes, while sugar, coffee and tea dropped much less (-3.4%).
Analysis of expenditure on packaged organic products by geographic area shows domestic consumption continues to be concentrated mainly in the northern regions of the country, similar to what was recorded in the past. Consumption showed an increase (in value) in all areas, with a particular increase in purchases in the North-West (+12.5%) and South (+19%). Although the South's overall share of Italy's total increased slightly in 2011, the imbalance between production sites and places of consumption remains, a typical feature of Italian organic. Most of the consumption of organic products is concentrated in a 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. Strong concentration of purchases on a limited number of products, as well as of a few cat-

Tab. 2 – Value of household purchases of organic products by geographical area, 2011

	% Share to Italy's total 2011	% Change 2011/10
Total Italy	100.0	8.9
of which:		
North-West	38.5	12.5
North-East	32.9	2.4
Centre[1]	20.7	9.8
South[2]	7.9	19.2

[1] Includes Sardinia.
[2] Includes Sicily.
Source: ISMEA, GFK-Eurisko Panel on Families.

egories, continues: the top twenty products cover about 72% of the total household expenditure for packaged organic products and the top ten account for 57%. The most-consumed organic food in terms of expenditure is still eggs (+21.4%). Yogurt follows, with a share to total of more than 9% and an increase in purchase value of 27.5%. Milk, third in the ranking, makes up 8.5% of total organic sales, with an increase in consumption of 9.5%.
In terms of products, there are not remarkable differences in consumption among different parts of the country, except for soy beverages and extra-virgin olive oil, which are purchased more in the Northwest; instant powdered drinks, most appreciated in the Centre; breakfast cereals, lettuce and broth cubes, mostly consumed in the North-East.

Tab. 3 - Top ten organic products by purchase value, 2011

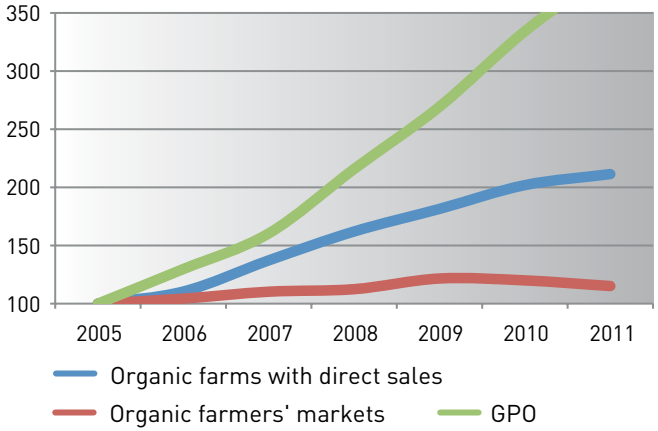
Organic products	% Share to total	% Change 11/10
Eggs	13.6	21.4
Yogurt	9.2	27.5
Milk	8.5	9.5
Jams and marmalades	8.2	8.6
Bread substitutes	5.2	0.3
Biscuits	3.1	13.0
Fruit juices	2.7	-11.4
Pasta	2.4	-11.4
Soy beverages	2.1	27.7
Instant beverages	2.0	-5.8
Total packaged organic products*	**100.0**	**8.9**

** Figures cover approximately 87-90% of total value of packaged organic products purchased for household consumption.*
Source: ISMEA. GFK-Eurisko Panel on Families.

Other channels

ISMEA monitors data on domestic consumption in non-specialised channels, basically large-scale retail (GDO). In other channels, including the very important speciality stores, there are no statistics on sales trends, but some information is available from Bio Bank figures.
According to Bio Bank, there were 1,212 specialised shops in Italy in 2011 (+4.2% compared to 2010). 65.3% of these shops are concentrated in the North, 22.3% in the Centre (including Sardinia) and 12.4% in the South (including Sicily).
Information from some of the largest distribution companies that exclusively supply the specialised channel indicates, for the same year, an increase of turnover

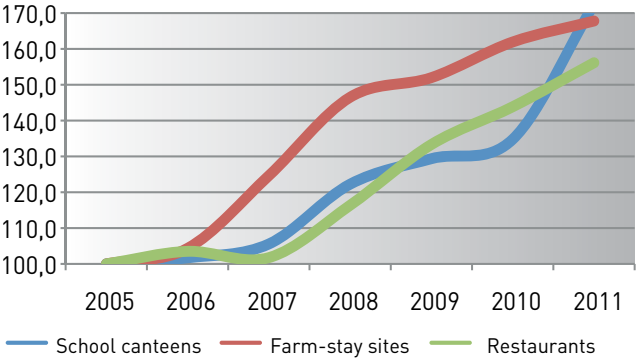
Graph. 6 - Progress in number of sales points in some organic channels (indexed figures, 2005=100)



Source: Processing of Biobank figures.

within the sector of between 10% and 20%.
Besides the important channel of specialist shops, many alternative forms of sales are on the rise. They still have a limited share of the market, but attract growing interest on the part of the consumer. These include direct sales, group purchasing organisations (GPO) and organic markets. For these types of sales we have only Biobank figures, which monitor the number of outlets. They show a steady increase, with annual growth rates higher for GPOs and direct sales than for farmers' markets, which in 2011 also showed a slight decline in number.
Channels outside the home (organic school canteens, restaurants, farm stay sites) have also recorded strong increases in the number of units in recent years, particularly in the case of farm stay sites and canteens, which grew by 28% in 2011.

Graph. 7 - Progress in number of sales points in some organic channels outside the home (indexed figures, 2005=100)



Source: processing of Bio Bank figures.

4. Prices and value chain

Introduction

ISMEA market figures for organic products, though limited to large-scale retail, indicate that the wealth generated by this segment is also growing in Italy. This trend is even more significant when one considers that consumption in large-scale distribution is concentrated within a limited number of products and in a situation of rising prices for organic and a widening price gap with conventional agriculture products.
The prices of organic products have always intrigued both economists and operators in the sector. In addition to being subject to the usual factors that influence market prices of consumer goods, the prices of organic products are affected by a peculiar structure at both primary production and market levels - reflected in a particular price dynamic. A summary indicator of these specific conditions is the so-called premium price, which is the positive differential in price between an organic product and its conventional counterpart. More generally, price levels of organic products seem to be influenced by several factors relating to market structure, on both the supply and demand sides. From the point of view of supply, the factors that contribute to the premium price are threefold:

1. higher production costs, due to lower yields, the adoption of more expensive production techniques and costs of certification;
2. a national production structure that, in the face of a sharp increase in the number of producers and surfaces, does not show a similar proportional rise in the share of production actually marketed as organic;
3. processing and distribution characterised by "artisanal" methods and a lack of logistics platforms to encourage economies of scale.

According to the ISMEA figures, of a group of products representative of the different organic supply chains[1], the consumer prices of organic products were down 1% in 2010 compared with a decline of 4.3% for non-organic.
In the case of organic products, the reduction in consumer prices, although welcomed in view of expansion of consumption, is much less than the drop in producer prices, amounting to about 4% compared to 2009. The trend is different for conventional products, for which production prices have increased by 4%.
The different behaviour of prices of organic products compared with conventional ones can be ascribed to a different elasticity of demand. Demand for conventional products, in a phase of financial difficulty and a scenario of sustained prices in previous years, would lead to a more elastic demand, with a relative decrease in prices. Not so for organic products. In this case, the reduction in producer prices is not reflected in consumer behaviour: we can therefore assume that rigidity of demand and asymmetrical information are the main reasons for this behaviour.

The prices of the most-consumed fresh bulk and packaged organic produce in Italy

Comparing the average prices of products consumed in Italy for the first half of 2009 and 2011, consumer prices for organic products examined rose by 11% as against a decline of 5% recorded for prices of similar non-organic products.
The average value of the differentials comes from changes in prices of individual products in widely different categories, but in general we can say that these variations depend on the availability of the products and the evolution of prices of conventional products.
First of all, packaged organic products show very different trends than fresh ones in bulk. Figures from the ISMEA Panel on families showed aggregated mean trends for or-

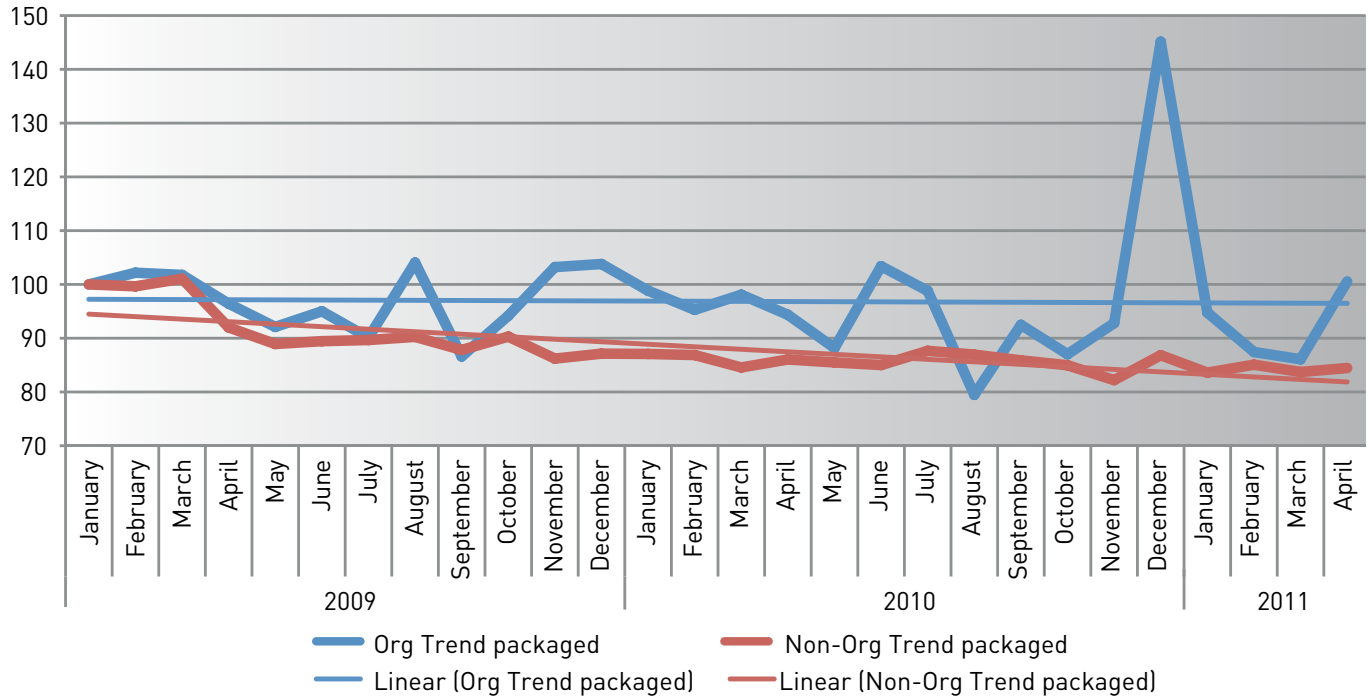
[1] *Eggs, fresh milk, yogurt, honey, tomatoes, bread, pasta, rice and extra-virgin olive oil. Prices used for analysis are calculated as the average by share of consumer prices within the product group.*

Tab.1 - Average prices for some organic and conventional products (euro)

	Organic		Non-organic		abs. change	abs. change	Δ %	Δ %
	1st half 2009	1st half 2011	1st half 2009	1st half 2011	org	non-org	org	non-org
Eggs	0.34	0.33	0.18	0.18	-0.004	-0.002	-1.1	-1.0
Milk	1.62	1.53	1.34	1.29	-0.089	-0.046	-5.5	-3.4
Bread	3.16	5.74	2.73	2.75	2.576	0.021	81.5	0.8
Extra-virgin olive oil	7.94	7.46	4.42	3.79	-0.483	-0.631	-6.1	-14.3
Tomatoes	2.06	2.11	1.95	2.02	0.045	0.073	2.2	3.8
Courgettes	2.00	1.97	1.86	1.75	-0.024	-0.104	-1.2	-5.6
Apples	1.33	1.35	1.28	1.29	0.018	0.018	1.3	1.4
Total	**2.64**	**2.93**	**1.96**	**1.87**	**0.291**	**-0.096**	**11.1**	**-4.9**

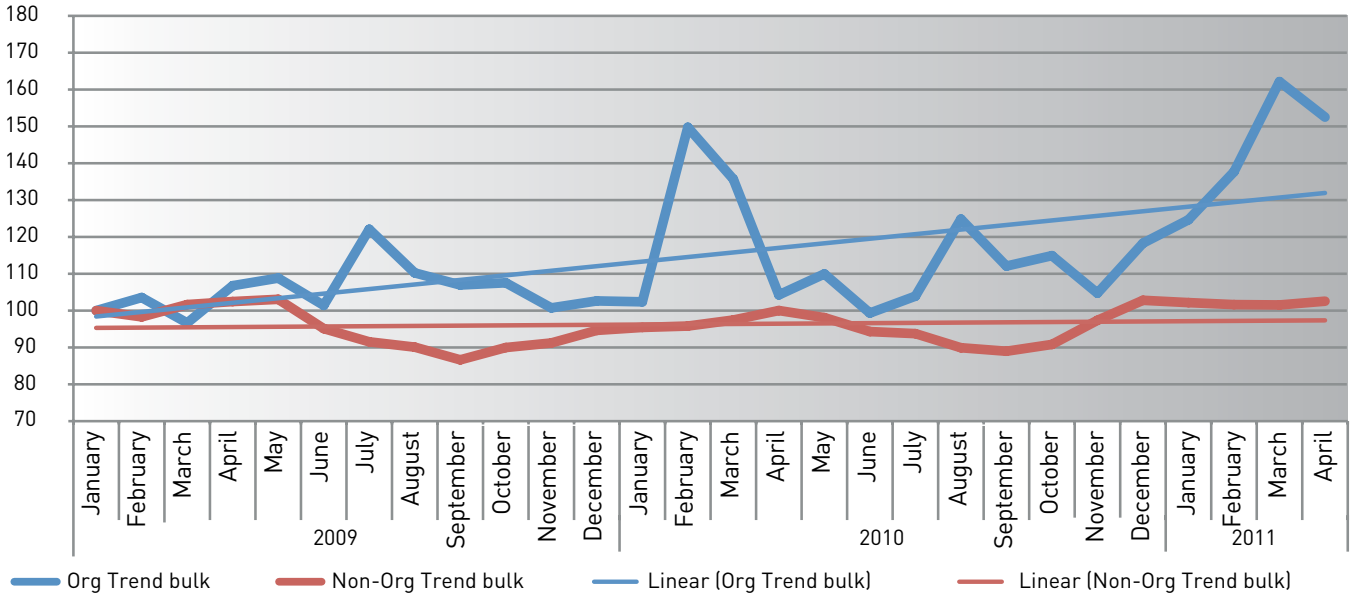
Source: processing of ISMEA figures.

Graph. 1 - Consumer price trend for Org and Non-Org packaged products (2009=100)



Source: ISMEA.

Graph. 2 - Consumer price trend for Org and Non-Org bulk products (2009=100)



Source: ISMEA.

ganic and non-organic prices from 2009 to early 2011 for the top four packaged products (eggs, bread, milk, olive oil), and last three fresh products (tomatoes, courgettes, apples).

Trends in the prices of organic products show profound differences in the breakdown of the premium price in the two categories analysed, highlighting fluctuations and cycles of considerable importance, especially for fresh produce in bulk. The price differential between organic and non-organic tends to increase in both cases; in particular, in the former, it is attributable to a contained rise in organic prices and a simultaneous decrease in the price of non-organic, while in the latter, there was a favourable trend in prices for organic products.

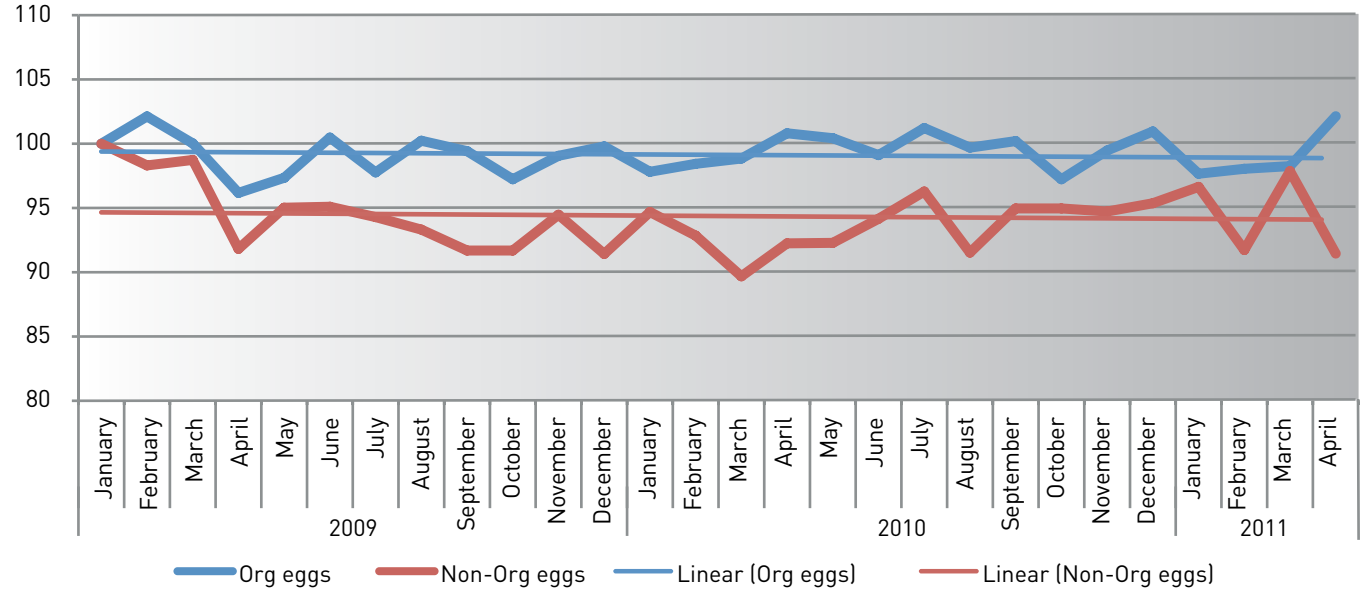
To provide additional information useful for understanding the phenomenon of the increase in premium price, the price trends for packaged products and bulk fresh ones were observed individually. Packaged products showed different trends for the four products examined. Eggs show a stable trend, both for organic and non-organic, and similar oscillations with larger deviations for the prices of conventional compared to organic. Recent surveys show a counter-trend which will be monitored in the future.

For bread, the situation is substantially different. An upward trend, strongly subjected to variations in the price of organic, corresponds to a stable, linear price for conventional and, consequently, a marked widening trend of the premium price.

The trend in consumer prices of fresh milk shows a still different situation, with both prices falling and cyclical, more marked for organic, wiping out the benefit and, according to the latest surveys, causing a worrying inverse trend for producers of organic milk.

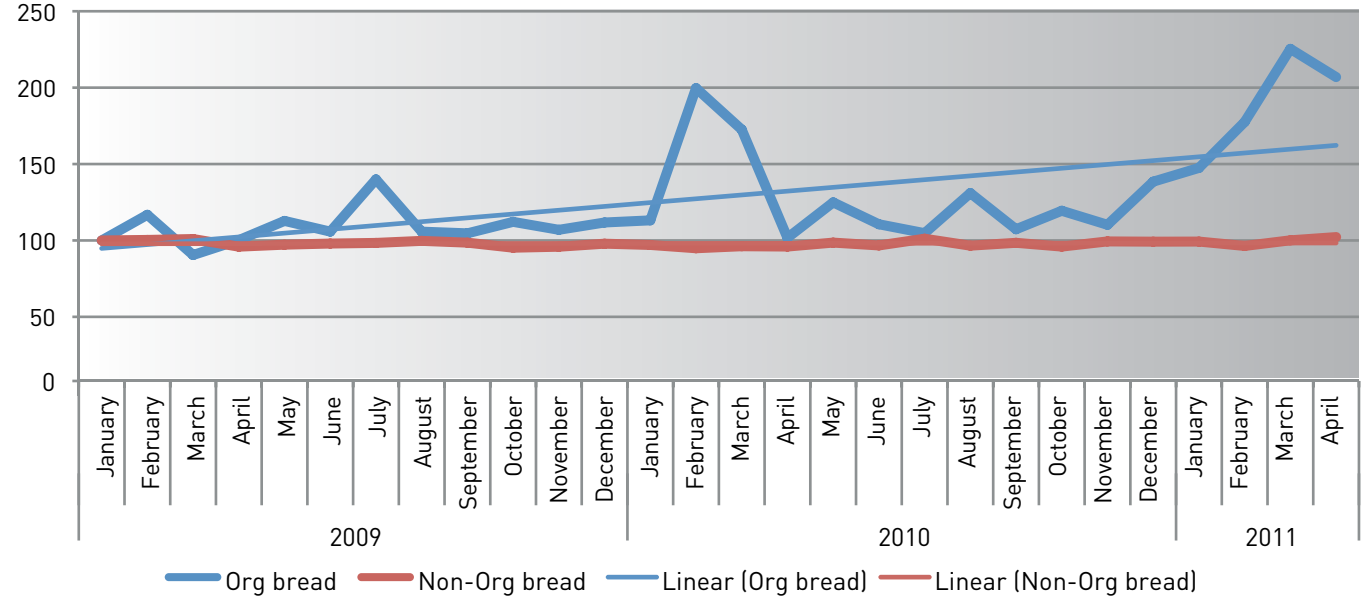
Also for extra-virgin olive oil, conventional product prices have fallen further. In this case, the decline in the case of non-organic, due particularly to the phenomena of competitiveness in the foreign market, is offset by a stable trend in organic price in the medium term, though with

Graph. 3 - Consumer price trend Org and Non-Org Eggs (2009=100)



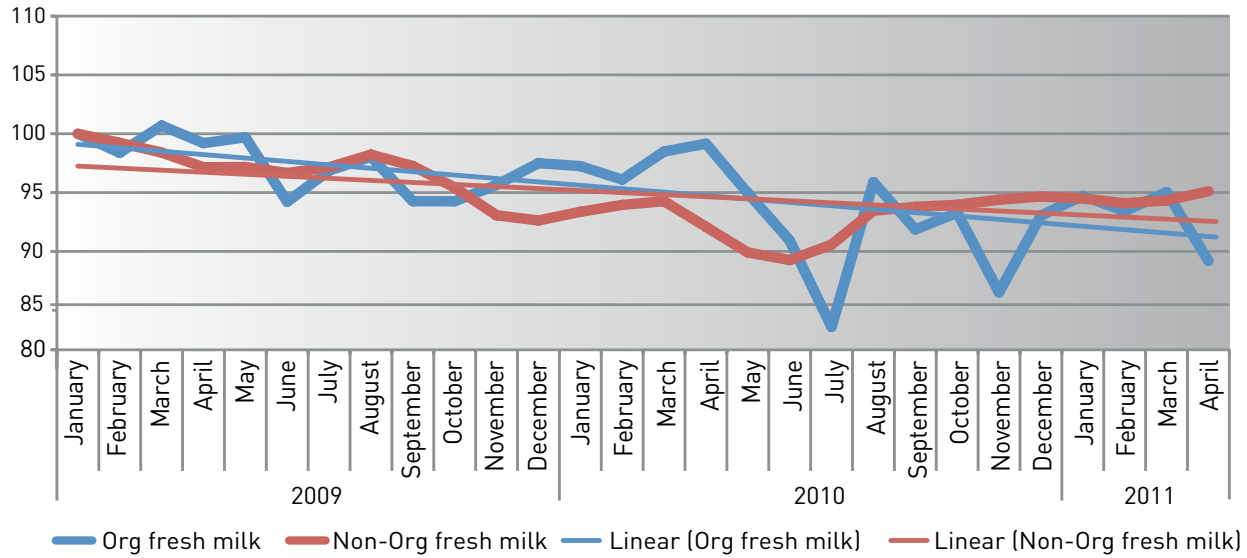
Source: ISMEA.

Graph. 4 - Price trend for Org and Non-Org Bread (2009=100)



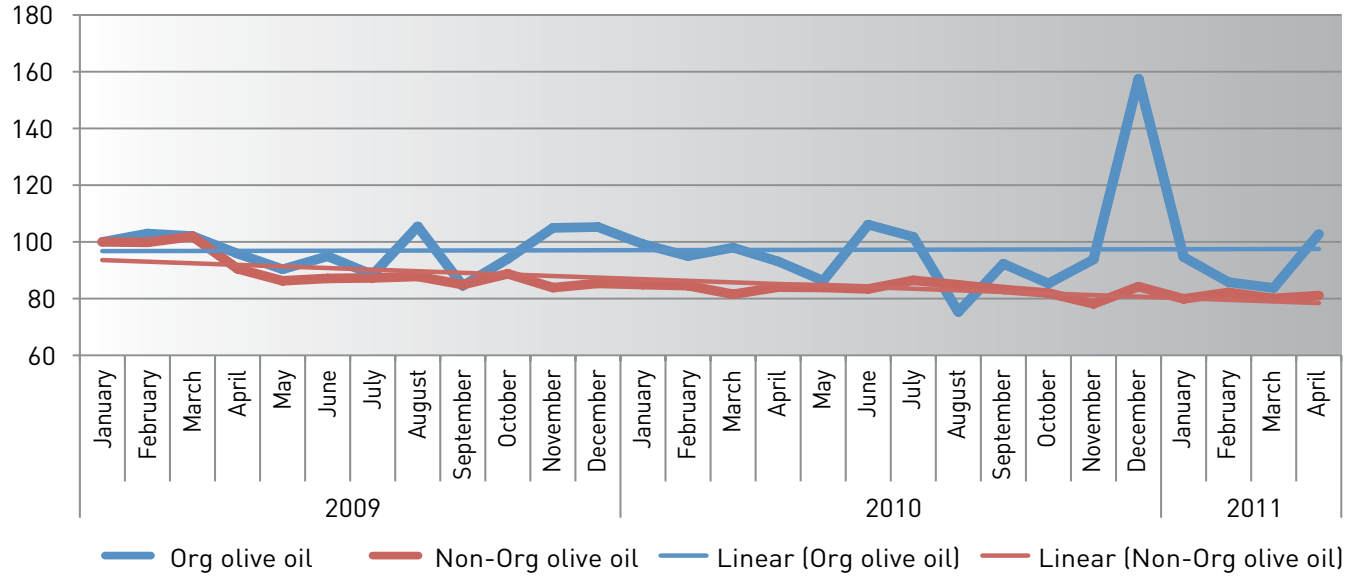
Source: ISMEA.

Graph. 5 - Consumer price trend for Org and Non-Org fresh Milk (2009=100)



Source: ISMEA.

Graph. 6 - Consumer price trend for Org and Non-Org Extra-virgin Olive Oil (2009=100)



Source: ISMEA.

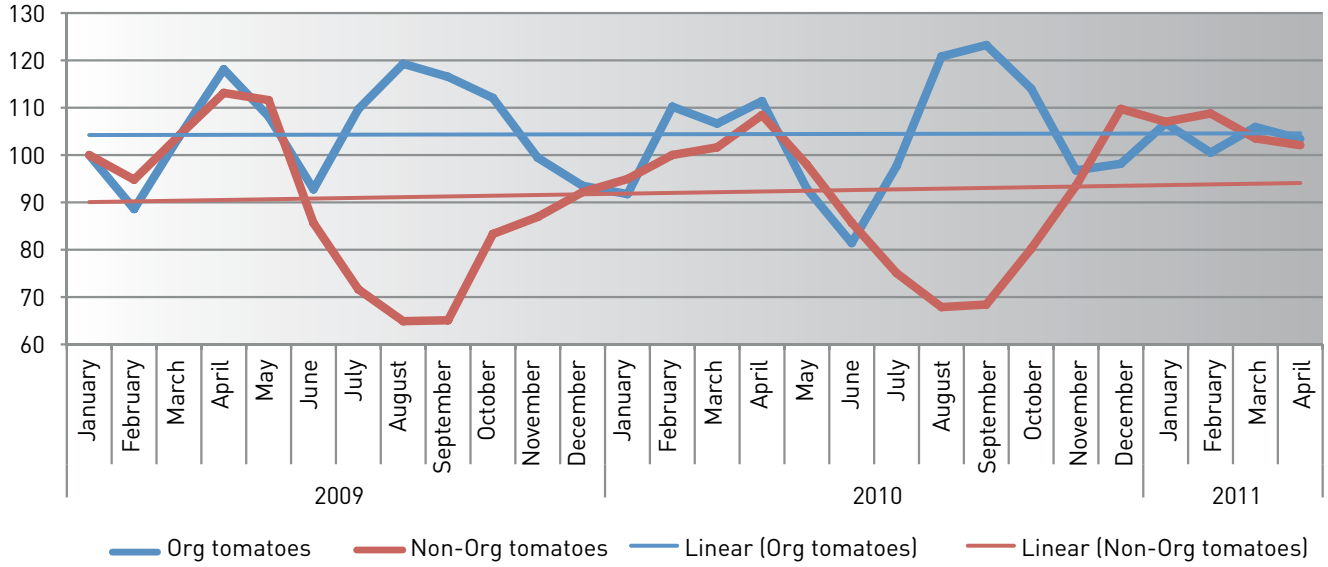
wide annual fluctuations.
Also with regard to bulk fresh products, it is interesting to study the various trends and cycles that distinguish the three types considered here.
The prices of fresh organic and conventional tomatoes show cyclic variations, illustrating how prices react in a totally different way during periods of high production. In those periods, fresh organic tomatoes are positively affected by the seasonality of production, and show a considerable increase in the premium price, probably relying on the consumer's image of a fresh product grown in the natural cycle.
Compared with tomatoes, organic courgettes do not tend to differ from conventional ones during periods of increased market presence, but always have a high premium price with a tendency to a progressive widening of the gap.
In the case of apples, prices are highly correlated with each other, presenting a relatively limited variability and a slightly higher increase in the price of organic than non-organic. These data suggest that the shelf life of products is a key factor in equalising price trends of organic and non-organic over time.
The differentiations of trends in consumer prices of the products examined seem to confirm some of the characteristics of the prices of organic products. These, in spite of the gradual expansion of consumption, seem characterised by cyclical demand, uncertainty, the tendency to maintain or expand the premium price, and growth in absolute terms.
The behaviour of the products considered here is also very different in relation to a number of variables (merchandise characteristics, degree of penetration in stores, the behaviour of similar conventional products, etc.). For example, for milk, the downward trend may be due to competition from several new types of products that are perceived by consumers as a speciality. Similar behaviour is observed for fresh apples, where perhaps information on the safety of the product and its production methods purveyed by major industry leaders has effectively standardized consumer perception of a product considered healthy by its "nature". An opposite trend can be observed for bread, in which the latest organic product is still enjoying the effect of introduction as a new speciality. The same is true, albeit with a lower level of benefit, for olive oil, while eggs, now a well-established presence, have a constant low premium price. Among fresh products, organic tomatoes also behave as a specialty, in periods of greater market presence and low prices, while the premium price for courgettes is high.

The value chain

The final price of organic products is also due to the peculiar structure of the market for them, and these differences can be highlighted through the distribution of prices along the supply chain. The so-called "value chain" of organic products is in fact significantly different from that of conventional products.
The ISMEA survey system can record the prices of some products in three different phases of trade - production, wholesale and consumption - facilitating the analysis of the phenomenon of distribution of value between producers, processors and sellers[2].

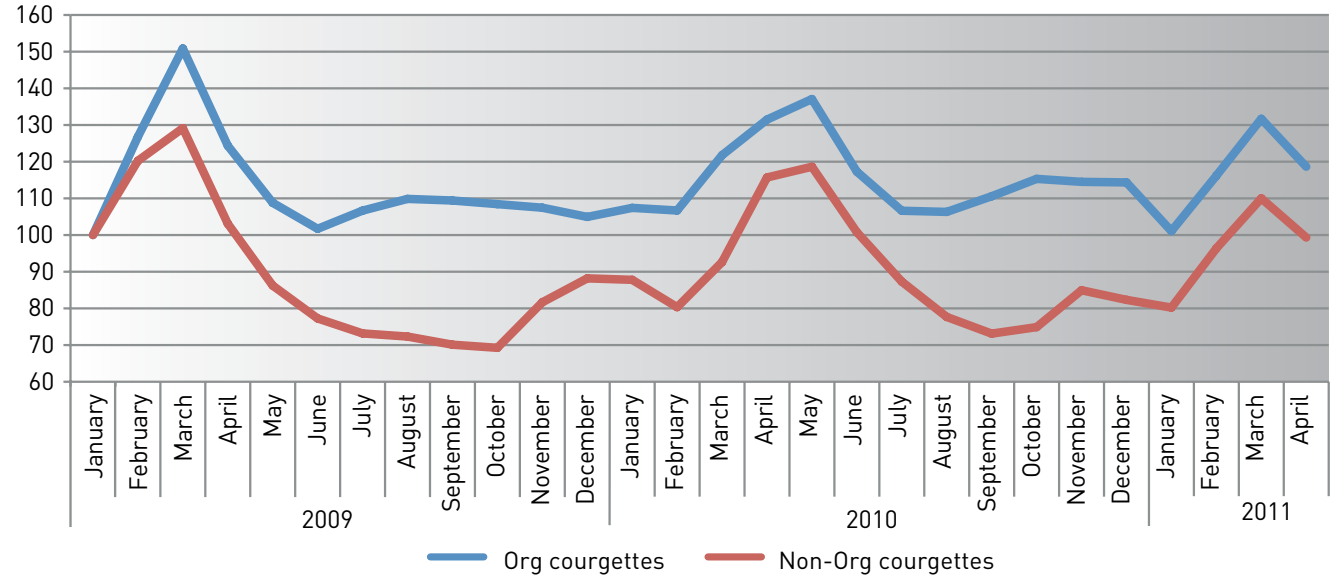
[2] *The ratio of prices at different stages of exchange is then calculated based on the prices in the phases of production, wholesale and consumption of the organic sector:*
1. *The supply prices are the producer prices, ie prices in the first phase of the exchange between the farmer and commercial intermediary. These prices, not including VAT, are recognised directly by ISMEA's survey Network of producer prices of agricultural products;;*
2. *Wholesale prices are the prices in the commercial intermediary phase, between commercial intermediaries and retailers. Prices of organic fruit and vegetables, not including VAT, are acquired from the Chamber of Commerce of Bologna;*
3. *Consumer prices are retail prices paid by consumers for the purchase of agri-food goods in the last phase of trade. These prices include VAT and are collected through a special survey among the major chains of large-scale retail.*
For the correct interpretation of the analysis, it should be noted that the share of the producer price and the wholesale price only indicate how much of the retail price can be attributed to the individual phases of the supply chain, measurements that otherwise do not assess the degree of profitability of the various stages of the supply chain, and can only be obtained after taking into account all fixed and variable costs to be borne in each phase.

Graph. 7 - Consumer price trend for Org and Non-Org Tomatoes (2009=100)



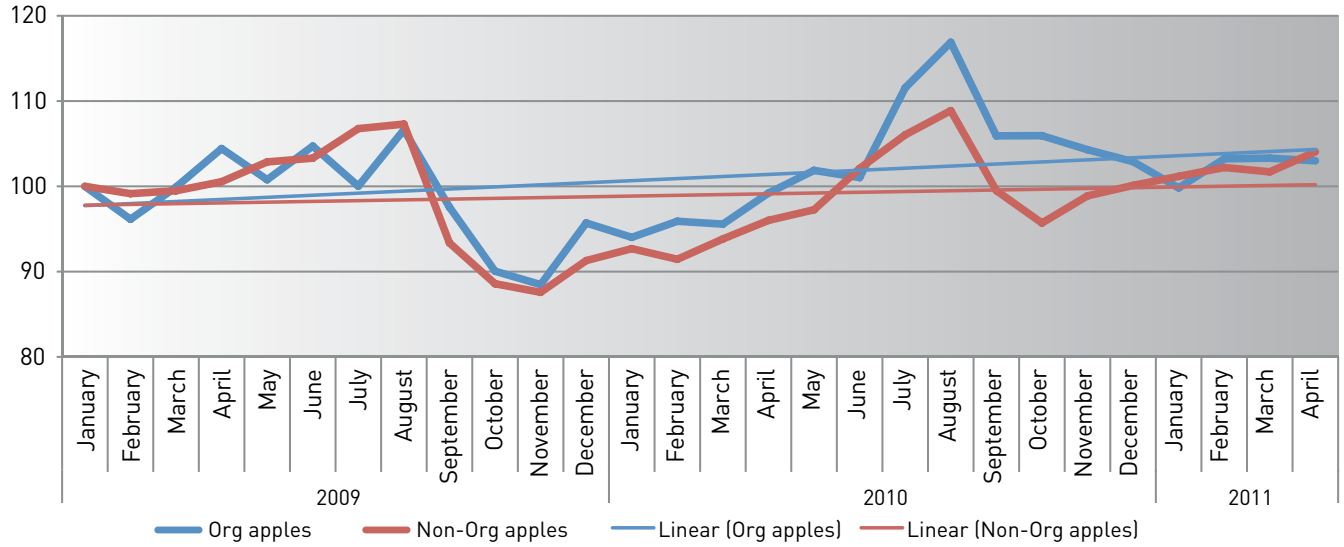
Source: ISMEA.

Graph. 8 - Price trend for Org and Non-Org Courgettes (2009=100)



Source: ISMEA.

Graph. 9 - Consumer price trend for Org and Non-Org Apples (2009=100)



Source: ISMEA.

Price breakdown along the organic supply chain has been analysed for the following five fruits and vegetables, which were available for the whole of 2011, for prices for production, wholesale and consumption: oranges, pears, tomatoes, courgettes and aubergines.

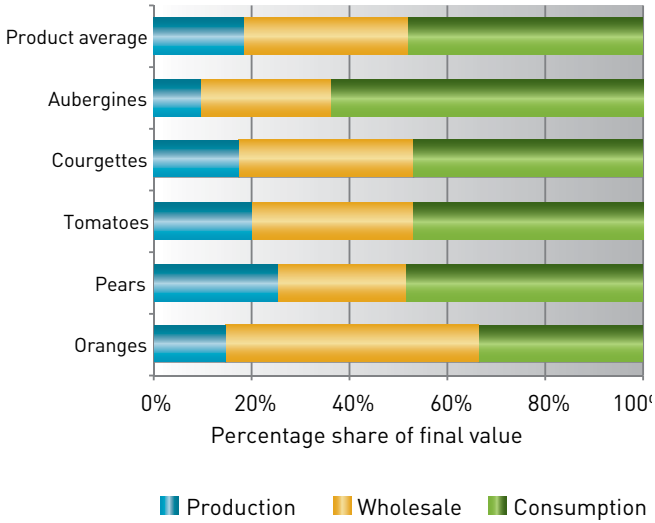
Looking at the results, we note that it is mainly in the distribution stage that the market value of vegetables and fruits increases most. In fact, mark-ups charged by wholesalers appear more limited than those charged by retailers to the consumer.

In reference to the products examined, the production stage contributes an average of just over 17% in the determination of the price to the consumer, wholesale is 34.5% and retail is almost 48%. The structure of the value chain, albeit with reference to a few products, reflects the characteristics of the organic supply chain, in some cases quite fragmented, which penalises the producer.

Among products surveyed, pears give the producer the highest percentage (25.3%), while oranges give the most value to wholesalers (51.8%). This is probably because the chain is better organised for pears than for oranges.

Aubergines, among other products tested, provide the lowest share for producers (9.7%) and the highest for retailers (63.8%).

Graph. 10 - The "value chain" for some organic fruit and vegetables, 2011



Source: ISMEA processing of CAAB market and ISMEA survey network figures.

5. Inputs

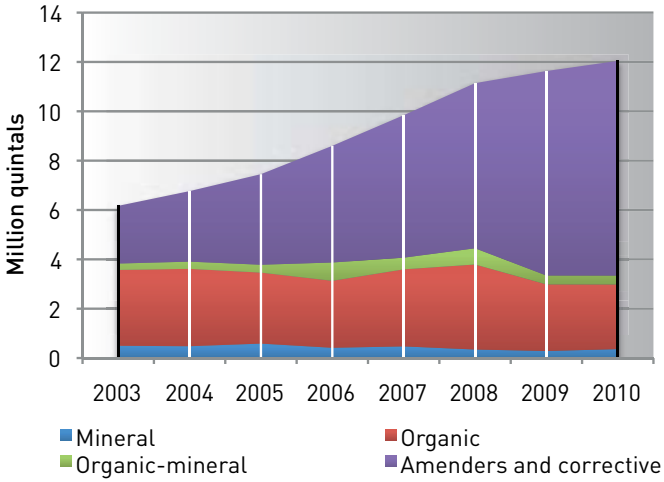
Fertilisers

The products allowed for use in organic farming are limited to the lists of active ingredients considered compatible with the principles in reg. (EC) No 834/2007 and subsequent reg. (EC) No 889/2008 detailed in Annex I (Fertilisers and soil conditioners), implemented at national level by Legislative Decree No 75/2010 (Annex 13).

The statistics available from ISTAT refer, however, not to final consumption of these products by organic farms but to their commercial distribution, and also include "organic" products used by conventional farms. It should be remembered, also, that in the organic sector own-production and consumption of natural fertiliser and organic matter are relevant, a factor that is not statistically surveyed.

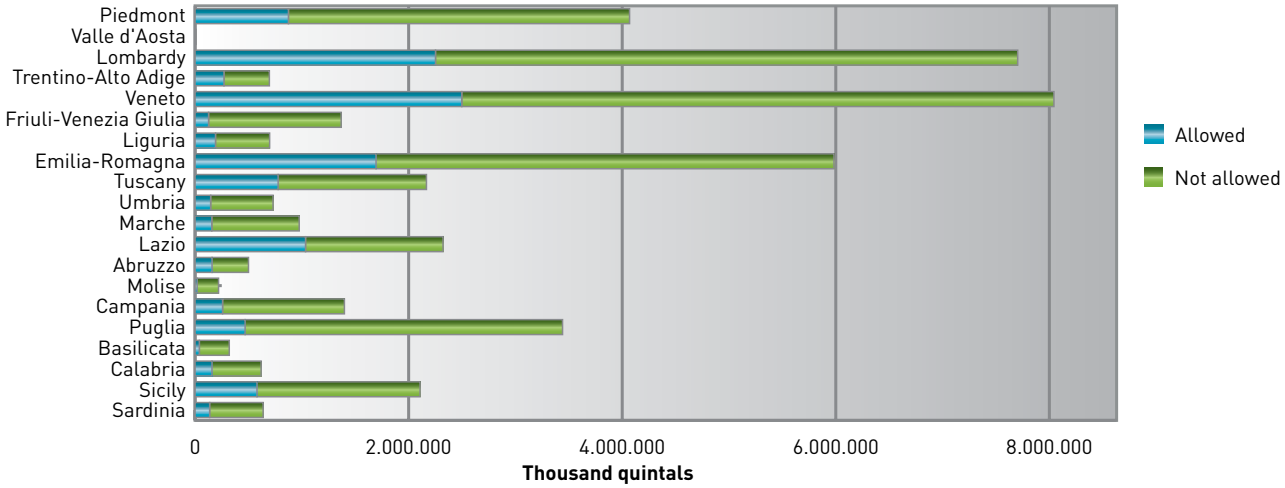
In 2010, the fertilisers distributed, allowed in organic farming, reached 11.8 million tonnes, confirming the upward trend of recent years. Soil amenders and correctives drive this growth, as the other types have generally declined over

Graph. 1 - Fertilisers by type



Source: ISTAT.

Graph. 2 - Fertilisers distributed by region, 2010



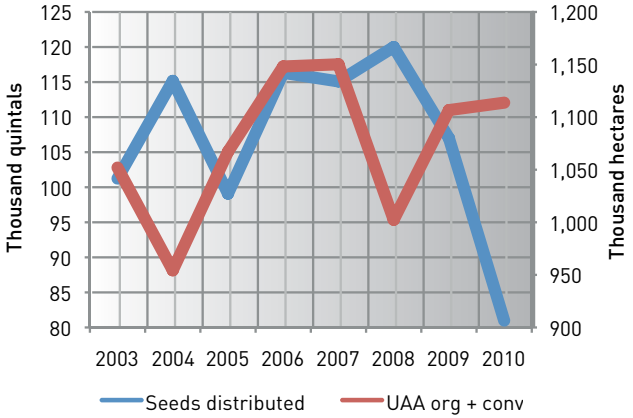
Source: ISTAT.

the past two years, especially mineral fertilisers, which fell by 46%.
The percentage of products allowed in organic farming to the total of fertilisers distributed has increased steadily from 2003 to 2010 from 12% to 27%. This relative growth was favoured by the parallel decrease in the amount distributed on the whole, down from 52 million tonnes in 2003 to 44 million tonnes in 2010, a decline that has reduced import flows.
Between 2009 and 2010, the national average increase in the amount distributed was 2%. The largest amounts were distributed respectively in Veneto, Lombardy, Emilia-Romagna and Lazio; in relative terms, the highest use of fertilisers on the whole occurred in Lazio, Trentino-Alto Adige and Tuscany with shares of around 40%; Molise and Friuli Venezia Giulia show the lowest shares, less than 10%.

Seeds

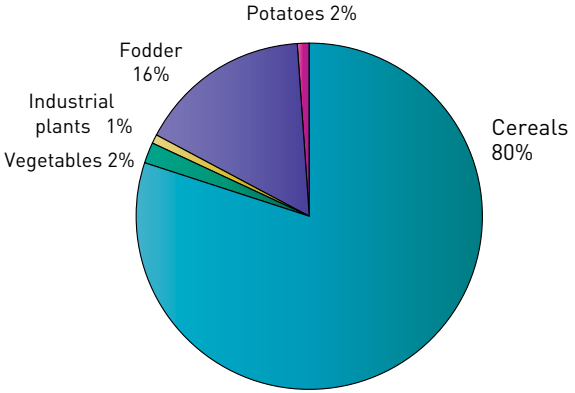
Certified organic seeds represent on average 2% of the total seeds distributed. The highest shares are recorded in the southern regions, with Basilicata at 15%, while in the north the percentages are very low and exceed 1% only in Emilia-Romagna.
The use of certified organic seeds has shown marked variability over the years in relation to both agricultural production trends and markets, and to margin of exemption, which in the absence of seed or vegetative propagating material obtained by organic production meth-ods, allows Member States to authorise the use of non-organic seeds, provided they are not treated with plant protection products, other than those authorised for the treatment of organic seeds, or GMOs (Art. 45 of Reg. (EC) No 889/2008).
A survey carried out as part of the Organic Seed Plan revealed a lack of varieties suited to environmental conditions and demands of farmers, who then resort to the instrument of ex-emption. This situation, which assumes controversial assessments according to the affected person (farmer or seed producer) undoubtedly has an impact on the statistical significance of the data discussed below, since the distribution of seed for organic farming is only

Graph. 3 - Seeds distributed and organic and under conversion UAA



Source: ISTAT and SINAB.

Graph. 4 - Percentage breakdown of distributed seeds by plant type, 2010



Source: ISTAT.

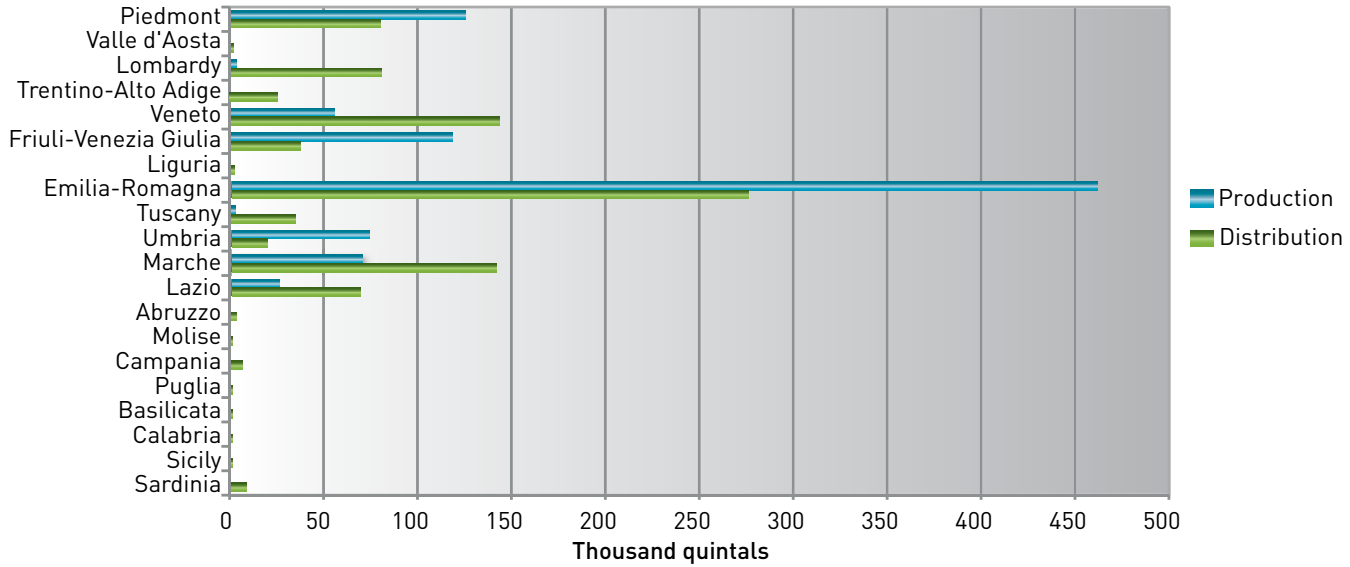
partly related to the performance of crops. As of the 2012 farm year, the requirement to use certified seeds for durum wheat will be reintroduced (dm 8139 of 10.08.2011), but organic farmers will be exempt. Perhaps this is a sign of a more stringent regulation that will extend to other plant species and also to organic production in the future.

Overall, the amount of organic seed decreased in 2010 by 24% compared to 2009, to just over 8.1 tonnes, the lowest level since 2003. The decline in distributed volume applies to most of the regions, more clearly affecting the south, where negative changes were almost all more than 30%. In contrast were some regions of the Centre-North, especially the Veneto (+134%) and some southern regions such as Molise and Sardinia, where increased use is due both to lower absolute values to begin with and lesser access to the instrument of exemption.
Cereals account for 80% of organic seeds distributed in Italy in 2010, followed by fodder with 16%, while the other plant species have minimum percentages that rarely exceed 1%. The use of seeds for cereals is higher in all regions of the Centre-South, with maximum levels in Campania and Molise.
For fodder, Basilicata, Emilia-Romagna and Tuscany stand out, with values between 150 and 210 tonnes of seed distributed; for vegetables, areas that use the largest quantities of seeds are the central regions and Emilia-Romagna.

Feedingstuffs

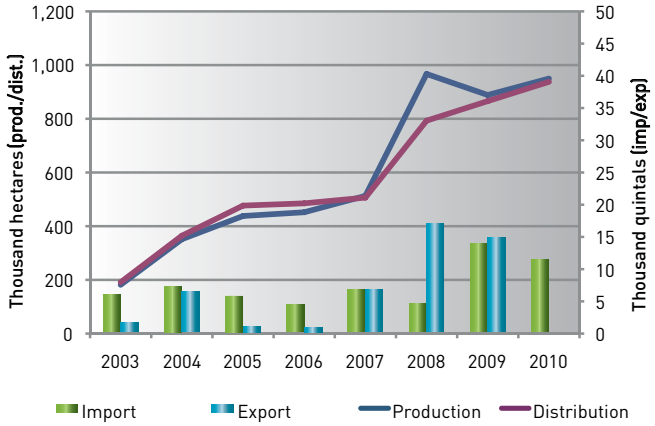
The food supply of organic livestock is mostly own-production or comes from other organic farms, but this phenomenon is not measured by statistics on the amounts distributed, which are therefore lower than real farm consumption. In general, feedingstuffs allowed in organic farming constitute only 0.6% of total feed distributed, with peaks of 11.6% in Friuli-Venezia Giulia and 4.7% in Lazio.
In Italy, in 2010, the industry and farms produced almost 950 thousand tonnes of feed allowed in organic farming, between complete and complementary. Compared to last year there was an increase of 7% and a consequent decline in imports by 18%. However, note the significant increase in flow of imports of certain raw materials, including organic cereals (+85% in the 2009-2010 period, source SINAB), which may have entered the animal feed production system, limiting imports of the processed product.
The feed distributed on the whole stood at a level slightly lower than production (938,000 tonnes), highlighting the

Graph. 5 - Feedingstuffs distributed overall, 2010



Source: ISTAT.

Graph. 6 - Production, distribution and trade of feedingstuffs in Italy



Source: ISTAT.

high degree of self-sufficiency of the Italian economy, with regard to the finished product, if not for raw materials. The time trend shows a steady increase in the quantities produced and distributed, while trade is highly variable but modest in absolute terms: in 2010, the ratio of exports to production was just over 1%.

Major regional production is concentrated in the Centre-North and in particular in Emilia-Romagna and Piedmont, while in the South, ISTAT does not survey quantities produced but only those distributed, probably due to the lower number of feed mills, located mainly where there is a greater concentration of industrial farming.

Changes in distribution of feed compared to 2009 indicate a national average growth of 20% for complete feed, while the amount of complementary feed declined by 10%.

The regions of the Centre-North absorb the largest amounts of this input. Emilia-Romagna and the Marches lead for complete feed, while complementary feedingstuffs are more distributed in the North, where grazing makes up a large share livestock food requirements.

Plant protection products

The use of plant protection products in organic farming is limited to a group of active ingredients allowed by law. In general, organic farms resort to natural practices and, in excep-tional cases, use the synthetic products allowed.

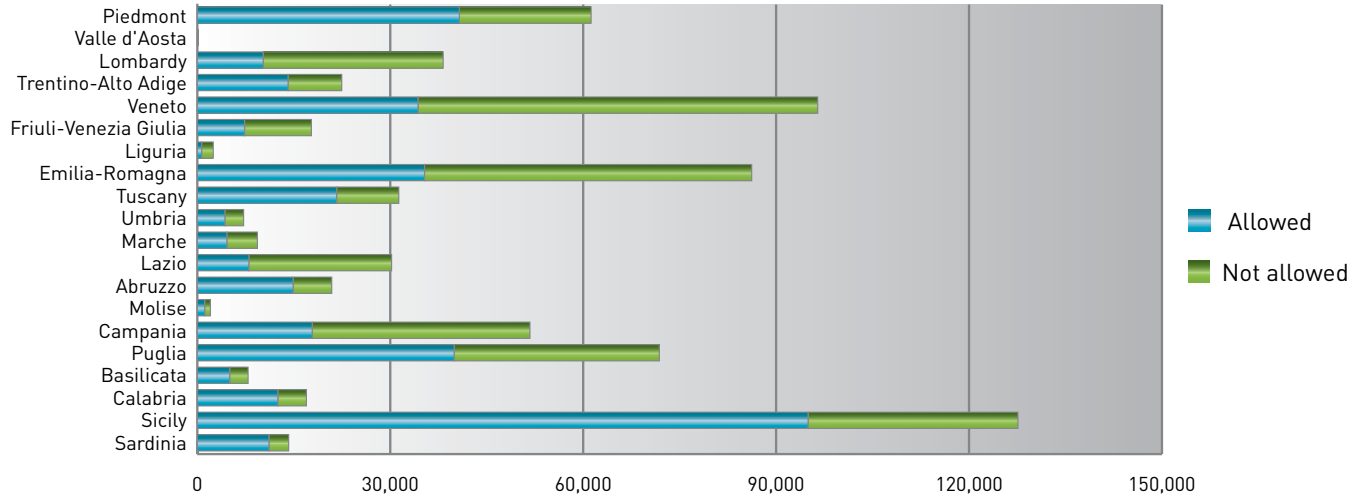
The share of products allowed in organic farming, compared to the total of active ingredients distributed, is very high, 53% of the national average in 2010. This indicates that the products allowed in organic farming are also widely used on conventional farms, because of their low environmental impact. Sardinia and Valle d'Aosta are the regions with the highest share (78%), but also in Calabria, Sicily and Abruzzo, the percentage exceeds 70%. A more or less intense use of active ingredients allowed in organic

Tab. 1 - Active ingredients distributed by type (t)

	Fungicides	Insecticides and acaricides	Organic	Other	Total
2003	43,076	9,610	47	43	52,777
2004	41,185	9,233	84	50	50,551
2005	41,892	8,050	135	71	50,149
2006	39,663	7,593	116	55	47,426
2007	39,031	7,071	119	61	46,283
2008	38,506	5,822	206	44	44,579
2009	35,834	5,371	342	59	41,606
2010	31,642	5,747	420	79	37,888

Source: ISTAT

Graph. 7 - Active ingredients distributed by region, 2010



Source: ISTAT.

farming depends on the presence or absence of crops with special needs for defence against plant disease, such as vegetables, fruit and vines.

The consumption of plant protection products continues to decrease over time: the amount distributed dropped from almost 53,000 tonnes in 2003 to 38,000 tonnes in 2010. The phenomenon is related to greater care by farmers in using these products but also to their greater effectiveness, meaning lower quantities can be used.

This situation is also favoured by the Community framework that urges greater sustain-ability of these products. In particular, the reg. (EU) No 1107/2009 introduced specific criteria regarding exclusion or limitation of active substances. The process of evaluation of crop protection products, which will take several years for substances on the market, may also be a critical element for organic farming, where there are fewer alternatives to current commercial products. In these cases the increased risk or cost of cultivation could lead farmers to abandon more problematic organic production.

Fungicides represent the largest share of uses, which over the last eight years was al-ways higher than 80%, but decreased slightly in 2010, as opposed to insecticides and acaricides, whose share of the total rose from 13% to 15%. There was a very small but growing share of active ingredients of organic origin (1.1%).

At the regional level the largest amounts distributed in 2010 were in Sicily (95,000 tonnes), followed by Piedmont (41,000) and Puglia (39,000). Compared to last year, there was a 9% drop in the national average and only in a few regions, including Puglia (+18%) and Abruzzo (+11), the signs were positive.

Bibliographical References

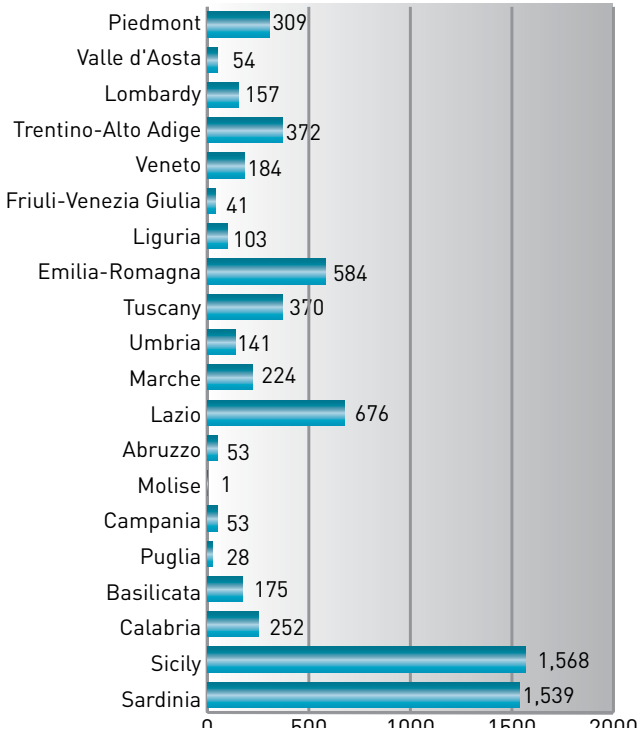
ISTAT (2003-2010), inputs, portal agri.istat.it
ISTAT (2012), Distribution of fertilisers for agricultural use. Year 2010, Statistics Report.
ISTAT (2011), The distribution of plant protection products for agricultural use. Year 2010, Statistics Report.
SINAB (2012), imports of organic products from non-EU countries, Biostatistics.

6. Organic livestock

Farms and herd size

In contrast to previous years, the most recent information made available by SINAB shows a slight decline in total number of certified livestock farms, from 7,350 units in 2010 to 6,884 in 2011 (-6%).
As for livestock in the 2010-2011 two-year period, there was a decline in cattle (from 207,000 to around 194,000 head) whereas for other species there was an increase of over 30,000 head of sheep and goats (+4% compared to 2010) and around 3,000 pigs (+10%); the poultry raised using organic techniques increased during the two-year period (+12%).
The geographical distribution of livestock farms showed a significant concentration in the Islands (45% of the total) and in some regions of the Centre and North (Lazio, Emilia-Romagna, Tuscany, Piedmont and Trentino Alto Adige). Compared to the previous year, significant decreases were observed in Sicily and Puglia, but numbers grew in Sardinia and Calabria.
The problems faced by organic farmers are the same that characterise, in general, all Italian livestock; first, the high volatility in the prices of feed and fodder, and growing energy costs, in addition to the not always profitable price of the products - in particular, cow, sheep and goats' milk - that especially penalises organic farms of small to medium size, as most Italian ones are.

Graph. 1 - Organic livestock farms by region, 2011



Source: SINAB.

Tab. 1 - Head of organic livestock by species, 2011

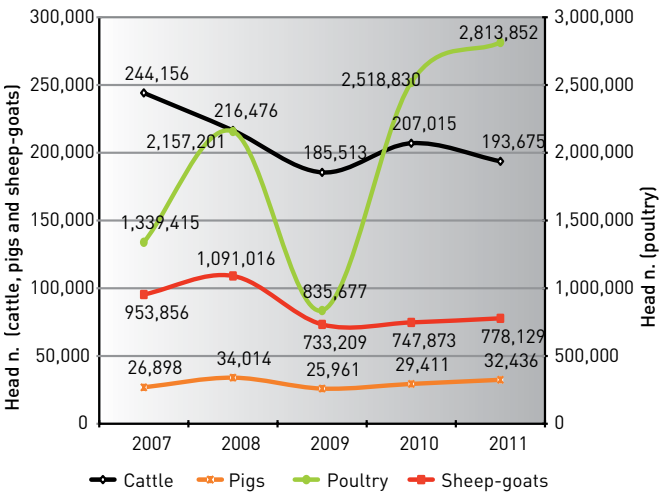
	Head n.	LSU n.	% to total livestock
Cattle	193,675	169,466	3.1
Sheep	705,785	70,579	8.9
Goats	72,344	7,234	7.5
Pigs	32,436	11,677	0.3
Poultry	2,813,852	29,545	-
Bees (n. hives)	99,260		-

Source: SINAB, ISTAT.

Financial results of farms

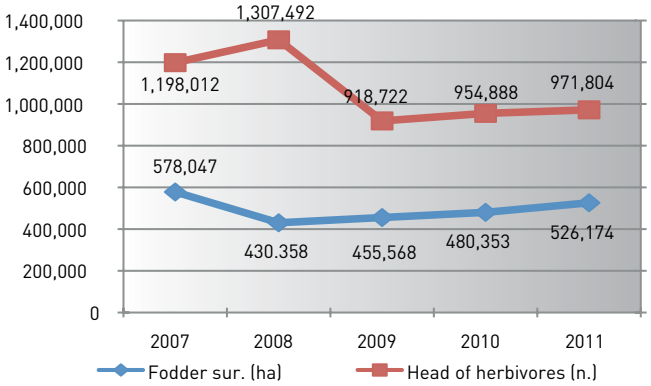
Technical-economic information surveyed by FADN provides a picture of organic livestock farms. In general, herds are very extensive, especially in the Centre-South

Graph. 2 - Head of organic livestock, by species raised



Source: SINAB.

Graph. 3 - Organic fodder surface and head of herbivores



Source: SINAB.

and the Islands, where the average UAA is more than 100 hectares and most are family-operated, as evidenced by the FWU/TWU ratio[1], higher than 75% in almost all cases.

The economic results of these farms are quite different depending on geographical area. In the North-West and the Centre there is a higher profitability of labour (over 50,000 euro/FWU), while the performance of farms in the Northeast seems slightly affected by the high value assumed by the cost of livestock rearing. In the Centre-South and especially in the Islands, although revenues are lower, the lower share of current costs provides satisfactory labour profitability in any case.

Processing of products and the market

In the 2007-2010 period, farms that process organic live-

Tab. 2 - Structural parameters of FADN organic livestock farms, 2010

	Farms	UAA	UAA fodder	LSU	FWU	TWU	LSU/UAA	UAA/TWU	FWU/TWU
	(n.)	(ha)	(ha)	(n.)	(n.)	(n.)		(ha)	(%)
North-west	37	81,8	62,1	69,7	1,6	2,1	0,9	38,4	76,7
North-east	40	47,8	39,0	51,3	2,2	2,8	1,1	17,1	78,1
Centre	66	104,4	85,7	92,0	1,5	2,1	0,9	49,5	72,9
South	33	90,1	65,5	74,5	1,5	2,2	0,8	41,2	68,6
Islands	46	118,0	103,8	87,9	1,3	1,7	0,7	68,1	75,6

Source: INEA processing of FADN databank.

1 Family work unit (FWU); total work unit (TWU).

Tab. 3 - Economic results for FADN organic livestock farms, 2010

	Farms	TO/UAA	Current costs/ LSU	Long-term costs/LSU	Operating income/LSU	Net income/ FWU	Net income/TO
	(n.)	€	€	€	€	€	%
Nord-ovest	37	1,812	767	259	1,213	51,691	57.1
Nord-est	40	3,056	1,108	256	978	30,746	45.9
Centro	66	1,383	461	189	849	50,862	54.1
Sud	33	1,226	573	191	614	30,514	41.4
Isole	46	645	271	117	543	36,435	62.7

Source: INEA processing of FADN databank.

stock products increased, on the whole, by more than one third, but their number is very variable from year to year. In 2010 compared to 2009, meat-processing companies were down (-16%) as were those involved in the processing of fats (-9%), while the animal feed and pet food sector is growing (+14 %).
In spite of the global economic and financial crisis that has negatively impacted agri-food consumption in Italy, the trend already seen in the previous year continued in 2011, with an increase in purchases by consumers of organically raised livestock products through large-scale retail (GDO).

In the case of milk and its derivatives, in 2011 ISMEA estimated a significant increase of domestic purchases (on the whole, more than 16%). Fresh milk and yogurt make up approximately 75% of the total supply of organic dairy products; substantial increases in consumption were observed for yogurt (+27.5%), fresh milk (+9.5 %) and butter and other dairy products. Conversely, there was a slight reduction in purchases of mozzarella, and a general trend to decreasing consumption of longer-aged cheeses such as those made of spun paste, grain and spreadable cheese. Even domestic purchases of meat and sausages decreased slightly; however, these prod-

Tab. 4 - Organic farms that process products by type (n.)

	2007	2008	2009	2010	% Change 10/07
Processing and preserving of meat and production of sausages (including meat and poultry meat and products from poultry)	285	308	383	320	12.3
Production of dairy products (including cheese and ice cream)	343	333	425	438	27.7
Manufacture of vegetable and animal fats (including margarine and similar edible fats)	1,224	835	1,794	1,630	33.2
Production of processed feed (including feed for farm animals and pets)	20	75	127	145	625.0

Source: SINAB.

Tab. 5 - Trend in household consumption of main organic dairy products, 2011

	% Change 2011/10	% share to total organic dairy
Total organic dairy	16.2	100.0
of which:		
Yogurt	27.5	39.5
Milk	9.5	36.5
Butter	26.8	5.4
Crescenza/Stracchino	1.6	4.9
Dessert	24.2	4.4
Cream	6.6	1.6
Mozzarella	-2.2	1.3

Source: ISMEA, GFK-Eurisko Family Panel.

ucts account for only a modest share of the total basket of packaged organic food.

ISMEA data also indicate that base prices of milk and some organic cheeses showed a tendency to rise in 2011, albeit to a lesser extent, while prices of live animals suffered an overall decline, after double-digit increases observed in 2010 for almost all farmed species and categories. However, the consumer prices of main products of organic livestock were stable or slightly down.

Tab. 6 - Base and consumer prices of main organic livestock products

	2011	2010	% Change 2011/2010	Note
Base price (euro/kg)				
Dairy				
Cow's milk (euro/l)	0.52	0.54	3.8	Price refers to Lazio and Lombardy regions
Fresh sheep cheese	7.90	8.60	8.9	Price refers to Lazio and Sardinia regions
Seasoned sheep cheese	10.12	10.21	0.9	Price refers to Lazio and Sardinia regions
Ricotta	4.50	4.50	-	Price refers to Lazio region
Live animals				
Purebred beef cattle	1.60	1.57	-1.9	Price refers to Emilia-Romagna region
Purebred beef calves	3.45	3.30	-4.3	Price refers to Emilia-Romagna region
Purebred beef yearlings	3.24	3.17	-2.2	Price refers to Emilia-Romagna region
Live pigs housed	2.67	2.63	-1.5	Price refers to Emilia-Romagna region
Live pigs grazed	3.21	3.39	5.6	Price refers to Emilia-Romagna region
Meat and eggs				
Chicken (broiler)	6.94	6.37	-8.2	Price refers to average of packaged broilers and not to the Lombardy region
Eggs (euro/piece)	0.20	0.20	0.0	Price refers to M and XL weight eggs from Emilia Romagna, Lazio and Lombardy
Consumer price (euro/kg)				
Dairy				
Cow's milk euro/l)	1.74	1.71	-1.7	National average
Yogurt	4.57	4.44	-2.8	National average, natural+flavoured
Butter	12.90	-	-	National average
Meat and eggs				
Adult beef fillet	38.98	38.98	-	National average
Eggs (euro/piece)	0.40	0.43	7.5	National average, packets of 4 and 6

Source: ISMEA.

PART II:
POLICIES FOR ORGANIC FARMING

Community regulations

With the reg. (EC) No 834/2007 on organic production and labelling of organic products[1] and subsequent additions or modifications, the sector-specific legislation has been extended to products not covered by previous legislation, such as aquaculture, yeasts and seaweed. The EU regulatory framework for organic production is here extended to wine, which becomes a specific object of the most recent Commission Implementing Regulation (EU) No 203/2012 on wine-making, awaited for years, which prescribes specific rules on processing aids and techniques that can be used, as well as the limits to the use of sulphites. As of the 2012 harvest, organic designation wine labels are allowed, together with the organic production logo of the European Union[2].
After the transitional period of two years within which the organic farming sector must comply with the new EU rules on labelling, as of 1 July 2012 the EU logo, the Euro Leaf, must be shown, together with an indication of origin of the raw material, on packaging of pre-packaged food of which at least 95% of the ingredients of agricultural origin have been organically produced, and as of that date, therefore, it is no longer possible to use labels and packaging material for organic products that contain terms that refer to the old regulations, except for wine whose transition period ends 31 July 2012, and for products already on the market that can be sold until they run out.
Among the latest news reports, on the production of feedingstuffs, reg. of execution (EU) No 505/2012, which amended the reg. (EC) No 889/2008, encourages the production of feed on organic farms, in order to reduce the transport and the environmental impact, and allows for the use of non-organic protein feed for a limited period of time, so as to satisfy nutritional requirements for pigs and poultry raised on organic holdings. The new regulation of 2012 provides that at least 60% of the feed for herbivorous species be produced on the same farm, and for pigs and poultry, the threshold is set at 20%, but in case of difficulty to self-produce the share of feed called for in regulations, the farm can produce feed in cooperation with other organic farms in the same region of the livestock operation.

The regulation also contains provisions for beekeeping[3] and extends until 31 December 2014, if necessary, both the possibility of introducing non-organic pullets on organic farms, and to use feed monogastric animals, including equidae, up to 5% non-organic protein feed.
As is known, for certain animal species, aquatic plants and microalgae for the production of animal feed and catering, the Member States, pending detailed Community production rules, may apply national rules or, in the absence thereof, accepted or recognised private standards. In Italy MIPAAF has recently approved, pursuant to art. 42 of reg. (EC) No 834/07, the rules of private CCPB LTD for the production, preparation, marketing and labelling of organic ostriches and organic spirulina.
It should be noted, finally, that, in its recent report on

[1] *The field of application of the regulation affects live or unprocessed agricultural products and processed agricultural products for use as food that come from agriculture and aquaculture, including feedingstuffs, vegetative propagation matter, seeds for sowing and yeast used as food or feedingstuffs.*
[2] *See Chapter 15 of this volume.*
[3] *In particular, the regulation provides that at the end of the honey harvest bees must have enough reserve honey and pollen to survive the winter and adverse climate conditions; further, bees must be raised using strictly organic honey, sugar syrup and sugar.*

the reg. (EC) No 834/07 (COM 212 11 May 2012), the European Commission considers it appropriate to initiate a constructive debate with the European Parliament, the Council and all European stakeholders, in order to evaluate possible legislative proposals for the sector, in particular on the following themes: simplification of legislation, rules of coexistence between organic and GMO production, improvement of marketing and control systems. For controls, the European Court of Auditors, Special Report No 9/2012 "Audit of the control system of production, processing, distribution and import of organic products", made a series of recommendations - from the exchange of information to strengthening the institutional roles of supervision of control bodies - to correct identified weaknesses both at the European Commission in the Member States.

The agreement for imports from non-EU countries

Agricultural products and packaged food imported from non-EU countries can be labelled as coming from organic farming only if they have been imported in accordance with the regs. (EC) No 834/07 and 1235/08 and subsequent amendments and additions. The judgment of equivalence, already provided by previous legislation and carried out directly by the European Commission for certain non-EU countries when the new rules go into effect is to verify the existence of a system of production and control equivalent to that in force in the EU. The recent agreement reached by the two historical regulated "blocks" of organic products - Europe and the United States - in force since 1 June 2012 [reg. No (EU). 126/2012] - expanded the list of non-EU countries from which imports are authorised under the equivalency arrangement, contained in Annex III to reg. (EC) No 1235/08, most recently replaced by Annex I reg. (EU) No 508/2012. It applies to 11 countries - the United States, Argentina, Australia, Canada, Costa Rica, Japan, India, Israel, New Zealand, Switzerland and Tunisia - defining for each the product category for which the system of equivalence is valid, and citing the competent authority and the approved inspection bodies in the country. Examination of the list of non-EU countries shows that imports are mainly allowed for unprocessed crops, vegetative propagating material and seeds, as well as food consisting of plant-based ingredients; organic wine may only be imported from the United States; animals and products of animal origin may be imported only from Argentina, Canada, Switzerland, United States and New Zealand, while organic feed can come from Canada, Switzerland and the United States. Authorisation is not required, however, for imports of organic products from countries of the European Economic Area (Iceland, Liechtenstein and Norway).

The system of equivalency has been extended with approval by the Commission of a list of certification bodies and inspection authorities to establish equivalence with European legislation. This list, in Annex IV of reg. (EC) No 1235/08, replaced by Annex II of reg. No (EU). 508/2012, was established after considering both the operational capacity of organisations, and the disciplines that apply in different countries, taking as a minimum the "Guidelines 32-1999" of the Codex Alimentarius. There are 53 bodies, including five in Italy (Bioagricert srl, CCPB srl, ICEA, IMC Ltd and Soil and Health Ltd.), with lists for each of those countries where they can operate and the different product categories for which authorisation is valid. Overall, as of 1 July 2012, organic products that can be imported without the need to request authorisation from the competent authority come from more than 130 non-EU countries.

For organic products not from equivalent countries listed in Annex III, or not certified by bodies conforming to Annex IV of reg. (EC) No 1235/2008, or not belonging to spe-

[4] *For an understanding of the new provisions, the EU has issued the document "Frequently Asked Questions and Answers" (http://ec.europa.eu/agriculture/organic/files/news/Website_FAQs_EU-US-equivalence_1_June_2012_EN.pdf).*

Community rules on organic production

- *reg. (EU) No 508/12 of the Commission of 20 June 2012 amending reg. (EC) No 1235/08 as regards the arrangements for imports of organic products from non-EU countries;*
- *reg. (EU) No 505/12 of the Commission of 14 June 2012 amending and correcting reg. (EC) No 889/08 regarding, in particular, the production of organic feed;*
- *reg. (EU) No 203/12 of the Commission of 8 March 2012 amending reg. (EC) No 889/08 laying down detailed rules for the application of reg. (EC) No 834/07 concerning the manner of application to organic wine;*
- *reg. (EU) No 126/12 of the Commission of 14 February 2012 amending reg. (EC) No 889/08, concerning the documentation issued by inspection bodies concerning the certification status of each farm, and the reg. (EC) No 1235/08 as regards the arrangements for imports of organic products from the United States of America;*
- *reg. (EU) No 1267/11 of the Commission of 6 December 2011 amending reg. (EC) No 1235/08 laying down detailed rules for the application of reg. (EC) No 834/07 as regards the arrangements for imports of organic products from non-EU countries;*
- *reg. (EU) No 1084/11 of the Commission of 27 October 2011 amending and correcting reg. (EC) No 1235/08 laying down detailed rules for the application of reg. (EC) No 834/07 as regards the arrangements for imports of organic products from non-EU countries (some provisions with respect to Canada were revised);*
- *reg. (EU) No 590/11 of the Commission of 20 June 2011 amending reg. (EC) No 1235/08 as regards the list of non-EU countries from which certain agricultural products obtained by organic production must originate to be marketed within the European Union;*
- *reg. (EU) No 426/11 of the Commission of 2 May 2011 amending reg. (EC) No 889/08 laying down detailed rules for the application of reg. (EC) No 834/07 with regard to information on operators subject to the control system and the publication on the Internet from January 1, 2013;*
- *reg. (EU) No 344/11 of the Commission of 8 April 2011 amending reg. (EC) No 889/08 laying down detailed rules for the application of reg. (EC) No 834/07. Concerning the use of the EU organic logo, the regulation makes explicit the need for operators to be subject to the control system; it also defers to 31/07/2012 the possibility of using the term "wine from organic grapes" and provides for the insertion of "rosemary extract" among food additives in Annex VIII Part A;*
- *reg. (EU) No 471/10 of 31 May 2010 amending reg. (EC) No 1235/08 as regards the list of non-EU countries from which certain agricultural products obtained by organic production must originate to be marketed within the European Union;*
- *reg. (EU) No 271/10 of 24 March 2010 amending reg. (EC) No 889/08 laying down detailed rules for the application of reg. (EC) No 834/07 as regards the organic production logo of the European Union;*
- *reg. (EC) No 710/09 of the Commission of 5 August 2009 amending reg. (EC) No 889/08 laying down detailed rules for the application of reg. (EC) No 834/07 as regards the introduction of rules concerning the production of animals and organic seaweed farming;*
- *reg. (EC) No 537/09 of the Commission of 19 June 2009 amending reg. (EC) No 1235/08 as regards the list of non-EU countries from which certain agricultural products obtained by organic production must originate to be marketed within the Community;*
- *reg. (EC) No 1254/08 of 15 December 2008 amending reg. (EC) No 889/08 laying down detailed rules for the application of reg. (EC) No 834/07 on organic production and labelling of organic products with regard to organic production, labelling and control;*
- *reg. (EC) No 1235/08 of 8 December 2008 laying down detailed rules for the application of reg. (EC) No 834/07 as regards the arrangements for imports of organic products from non-EU countries;*
- *reg. (EC) No 967/08 of 29 September 2008 amending reg. EC No 834/07 on organic production and labelling of organic products;*
- *reg. (EC) No 889/08 of the Commission of 5 September 2008 laying down detailed rules for the application of reg. (EC) No 834/07 on organic production and labelling of organic products with regard to organic production, labelling and control;*

- *reg. (EC) No 834/07 of 28 June 2007 on organic production and labelling of organic products and repealing reg. (EEC) No 2092/91.*
- *Note from the European Commission of 17 November 2011 on ail rennet (processed agricultural product for food use); this product can be labelled as organic only if obtained from the stomach of calves raised organically in accordance with local regulations.*

cific categories of recognition, until 1 July 2014, however, request may be made to the national authority for authorisation according to the procedures in force.
Labelling of products imported from non-EU countries is subject to the requirements for non-imported products, including the code of the inspection body in charge of the operator who carried out the most recent production or preparation, with the exception of the use of the EU organic logo, which is optional. However, if the logo is used, the label must show the indication of origin, or the term "non-EU Agriculture", which can be replaced or supplemented by the country where not less than 98% of the agricultural raw materials of which the product is made come from.

National regulations

The national regulatory framework governing the production and labelling of organic products defined by Legislative Decree No 220/1995, implementing Articles 8 and 9 of Regulatio No (EEC) No 2092/91, did not expire with the entry into force of reg. (EC) No 834/07, but continues to apply in the implementation of Articles. 27-31 of the new regulation, except for potential incompatibility with subsequent Community legislation. It is accompanied by the Ministerial Decree of 27 November 2009, No 18354, which lays down the rules for implementing the new EU regulations; in addition, specific decrees of transposition and explanatory or prescriptive measures, as listed in the box below, were subsequently issued by MIPAAF.
More recent measures include the MIPAAF decree of 12 July 2012, which lays down rules for the implementation of Community rules on organic wine, and the Ministerial Decree of 1 February 2012 - to be put in force in consultation with the Regions and Autonomous Provinces - which establishes, in implementation of EU rules, the organic information system (SIB) for the computerized management of administrative procedures relating to the notification of organic activities. In regions where there are already operational computerised notification systems, ways to access the SIB are subject to the rules of authentication provided by the National Agricultural Information System (SIAN).
SIAN makes available an updated list of organic operators, while the SIB integrates existing regional information systems and completes the alignment of sector information, resulting from the supporting document issued by the inspection bodies concerning the certification status of each farm, the "holding file": in some cases, it provides more information, as in the Tuscany Region, which has put the annual program of production for each operator online. As of June 19, 2012, farms subject to the certification may not use more than one control body, as a result of the emergency measures introduced by the Ministerial Decree No 10071/12, which also dictates methods for changing certification bodies.

National standards for organic food production: ministerial decrees

- *Ministerial Decree of 12 July 2012, No 15992 - "Provisions for the implementation of reg. execution (EU). 203/2012 amending reg. (EC) No 889/2008 laying down detailed rules for the implementation of reg. (EC) No 834/2007 regarding the method of application to organic wine";*
- *Ministerial Decree of 3 May 2012, No 10071 - urgent measures to improve the control system as regulated in Art. 27 and following of the reg. (EC) No 834/07 and its implementing regulations;*
- *Ministerial Decree February 1, 2012, No 2049 - provisions for the implementation of the regulation for execution of (EC) No 426/11 and the computerised management of the notification of organic activity pursuant to art. 28 of reg. (EC) No 834/07;*
- *Ministerial Decree of 17 October 2011 - amending M.D. of 29 October 2010, No 16954 laying down provisions for the identification of the minimum procedures for sampling of organic products to be tested in implementation of reg. (EC) No 834/07, No 889/08, No 1235/08 on organic production and labelling of organic products;*
- *Ministerial Decree of 26 July 2011, No 14458 - procedures and tasks of government and stakeholders of the notifications of reports of irregularities by Member States within the information system OFIS (Organic Farming Information System) in organic farming;*
- *Ministerial Decree of 20 January 2011, No 700 - use of certified electronic mail to request authorisation to import from non-EU countries;*
- *Ministerial Decree of 13 January 2011 - technically unavoidable and accidental contamination of plant protection products in organic farming (maximum limit of 0.01 mg/kg, above which certification of organic products cannot be granted);*
- *Ministerial Decree of 29 October 2010, No 16954 - provisions for the identification of the minimum procedures for sampling of organic products to be tested in implementation of regs. (EC) No 834/07, No 889/08 and No 1235/08 on organic production and labelling of organic products;*
- *Ministerial Decree of July 30, 2010, No 11954 - provisions for the implementation of reg. (EC) No 710/09 as regards the introduction of rules concerning the production of animals and seaweed from organic aquaculture;*
- *Ministerial Decree of July 30, 2010, No 11955 - notification for the activity of production of animals and seaweed from organic aquaculture under reg. (EC) No 710/09;*
- *Ministerial Decree of 28 May 2010, No 8515 - amendment of the Ministerial Decree of 27 November 2009, No 18354 [Articles 8 and 11 with respect to the mandatory labelling requirements and procedures for the issuance of authorisation to import organic products from non-EU countries - art. 19 of reg. (EC) No 1235/08];*
- *Ministerial Decree November 27, 2009, No 18354, which contains provisions for the implementation of reg. (EC) No 834/07, No 889/08 and No 1235/08 and subsequent amendments on organic production and labelling of organic products.*

National standards for organic food production: ministerial memoranda

- *MIPAAF statement of 28 June 2012, No 14749 - deferment of the entry into force of Ministerial Decree of 1 February 2012 on the Organic Information System (SIB) - previously set for 1 July 2012 by the MIPAAF memorandum of 1 June 2012 - to a date to be determined in consultation with the Regions and Autonomous Provinces;*
- *MIPAAF memorandum of 20 June 2012, No 14017 - clarifications provided by the EU Commission about the exemption from the controls, the use of the code number and labelling of organic products intended only for export;*
- *MIPAAF memorandum of 6 June 2012, No 12968 - clarification about the use of ion exchange resins in the production processes of organic products;*
- *MIPAAF memorandum of 17 May 2012, No 11203 - clarification on the labelling of organic fish;*
- *MIPAAF memorandum of 2 April 2012, No 7758 - private standards for the production, preparation and marketing and labelling of organically raised ostriches;*

- *MIPAAF memorandum of 13 March 2012, No 5391 - private standards for the production, preparation and marketing and labelling of Spirulina algae;*
- *MIPAAF memorandum of 7 December 2011, No 25255 - clarification of the term "wine" under art. 27.1 of reg. (EC) No 889/08 and Art. 8.1.4 of Ministerial Decree No 18354/09, the term wine is to be referred to all products of the wine sector in Annex I Part XII of reg. (EC) No 1234/07 Single CMO;*
- *MIPAAF memorandum of 23 November 2011, No 23506 - private standards for the production of pet food accepted or recognised by the Member States under Article. 95 of reg. (EC) No 889/08;*
- *MIPAAF memorandum of 23 November 2011, No 23504 - Management of exemptions for the use of conventional seed or vegetative propagating material;*
- *MIPAAF memorandum of 17 November 2011, No 23070 - crop rotation with legumes in relation to the application of Art. 3 of Ministerial Decree of 27 November 2009, No 18354;*
- *MIPAAF memorandum of 14 November 2011, No 22604 - authorisation method for import of organic products from non-EU countries, in accordance with art. 19, para.1 of the reg. (EC) No 1235/08. The memo, referring to the request model for authorisation to import from non-EU countries (Annexes 6 and 6a, M.D. 18354/09) makes it clear that as an alternative to the certificate of confirmation/approval of the inspection body attachment, an assessment report can be attached, prepared by the accreditation body or the competent authority of that country;*
- *MIPAAF communication of 27 October 2011, No 24869 - approval of inspection bodies performing inspection and certification in aquaculture;*
- *MIPAAF note of 21 October 2011, No 20 422 - includes infusions of dried herbs among the products of plant and animal origin which must be reported according to the threshold of 0.01 mg/kg, as a lower limit, beyond which they cannot be certified as organic, even in the event of accidental contamination and technically unavoidable presence of residues of plant protection products;*
- *MIPAAF memorandum of 21 October 2011 No 20421 - labelling brand products. In the event that a distributor affixes its own brand to a pre-packaged organic product, it is considered to all intents and purposes a "preparer" because it changes the labelling of organic products. Consequently, as indicated in the MIPAAF memorandum of 11 November 2009, No 17281, it is required to show on the label the name or company name, the code of the body control, and the identification code assigned to it by the latter;*
- *MIPAAF memorandum of 13 October 2011, No 19638 - return to conversion status if non-organic seed is used, and if ENSE exemption is not submitted or has been declined;*
- *MIPAAF memorandum of 13 September 2011, No 17197 - clarification of organic aquaculture: "perimeter area" in reg. (EC) No 889/208, Art. 25 opties, letter b) means the area of '"land-water interface";*
- *MIPAAF memorandum of 5 August 2011, No 15884 - the use and marketing of formulations identified as invigorating under the current rules for conventional farming and under reg. (EC) No 889/08;*
- *MIPAAF memorandum 11 July 2011, No 13349 - application criteria for processed organic products regarding the presence of pesticide residues (threshold of 0.01 mg/kg as a lower limit), beyond which certification of organic production cannot be granted, even in the event of accidental and technically unavoidable contamination under M.D. of January 13, 2011, No 309;*
- *ICQRF memorandum of 18 May 2011, No 11632 - Compliance regarding control and certification of organic aquaculture;*
- *MIPAAF memorandum of February 7, 2011, No 2005 - percentage of non-organic young fish pursuant to art. 25e, par. 3, reg. (EC) No 889/08;*
- *MIPAAF memorandum of 4 February 2011, No 1874 - Sampling of biological products in beekeeping to be analysed for the purposes of controls required by law;*
- *MIPAAF release No 750 of 22 January 2010 on the M.D. 18354/09, which includes provisions regarding multi-annual rotations;*
- *MIPAAF circular of 11 November 2009, No 17281 - clarification on reg. (EC) No 834/07 and its implementing regulations (brand distributors and labelling);*

- *MIPAAF circular of 23 October 2009, No 23117 - Communication of assignment of reference number attributed by the competent control bodies pursuant to art. 58 of reg. (CE).*
- *MIPAAF circular of 11 November 2009, No 17281 - clarification on reg. (EC) No 834/07 and its implementing regulations (brand distributors and labeling).*
- *MIPAAF circular of 23 October 2009, No 23117 - communication of reference number assigned by competent control bodies pursuant to art. 58 of reg. (EC) No 889/08.*

Regional regulations

Many regional initiatives that discipline, support and promote the production, processing, storage and marketing of organically obtained products are based on legislation more than a decade old, which has resulted in long-term plans for the development of the regional organic agri-food sector, and whose objectives are encompassed by the RDP. In implementation of the Finance Act 2000, which introduced the use of organic, PDO/PGI and traditional products in the daily diets of public canteens, almost all the regions have produced legislation in this area and many municipalities have introduced organic food in public school meals.

Regional legislation for the development of organic farming

Piedmont	Regional Law No 13 of 25/6/1999, Standards for the development of organic farming and subsequent amendments and additions
Valle d'Aosta	Regional Law No 8 of 17/4/2001, provisions relating to cattle, sheep and goats and derived products obtained by organic methods (replaces rl 16/11/99, No 36)
Lombardy	Regional Law No 7 of 07/02/2000, Standards for regional measures in agriculture, Resolution GR No 15533 of 12/12/03, Approved program of measures for the development of organic farming
A.P. Bolzano	Provincial Law No 3 of 20/1/2003, Standards for Organic Farming (replaces pl of 04/30/1991, No 12);
A.P. Trento	Provincial Law No 4 of 28/03/2003, Support for agricultural economy, regulation of organic farming and labelling of non-genetically modified products and subsequent implementing rules (replaces pl of 10/06/1991, No 13)
Veneto	Regional Law No 18 of 13 August 2004, the rules of the primary sector (replaces Regional Law No 24 of 06/04/1990, rules on organic farming and encouraging the fight against plant disease);
Friuli Venezia Giulia	Regional Law No 32 of 07/24/1995, Disciplines and promotes organic farming (replaces rl of 29/12/90, No 59)
Liguria	Regional Law No 66 of 28 December 2009, Disciplines measures for the development, protection, qualification and exploitation of organic production in Liguria (replaces Regional Law No 36 of 6 December 1999, the repeal of rl of 1 February 1994, No 5);
Emilia-Romagna	Regional Law No 28 of 02/08/1997, Standards for the organic agri-food sector (replaces rl of 26/10/93 No 36 and subsequent amendments and additions)
Tuscany	Resolution No 1057 of 13/12/2010 on the application of M.D. of 30 July 2010, the Regional Law No 49 of 16 July 1997, provisions on controls for agricultural products obtained by organic methods (replaces rl of 19/04/1994, No 31 and rl of 12 April 1995, No 54)

Umbria	*Regional Law No 21 of 20/8/2001, provisions in the area of cultivation, breeding, testing, marketing and consumption of genetically modified organisms and the promotion of organic and local products; regional law No 39 of 28/8/1995, Standards for the production and control of organic products (replaces rl of 28/12/90, No 46)*
Marche	*Regional Law No 5 of 03/04/2004, Provisions on the protection of typical, quality and organic agricultural production; Regional Law No 4 of 04/03/2002, Discipline of Organic Agriculture (amending rl of 29/12/1997 No 76, replacing rl of 09/04/92 No 44, abolishing Regional Law of 13/12/1990, No 57)*
Lazio	*Regional Law No 21 of 30/6/1998, Standards for Organic Farming (replaces rl of 07/27/89, No 51)*
Abruzzo	*Regional Law No 53 of 30/05/1997, interventions in agriculture and agri-food*
Molise	*Regional Law No 38, 11/11/2005, Standards for Organic Farming (replaces rl of 13/03/1996, No 17)*
Campania	*Regional Law No 24 of 12/08/1993, Discipline, promotion and development of organic farming*
Basilicata	*Regional Law No 14 of 27/04/1999, Discipline of regional organic farming (replaces rl of 16/03/93, No 12)*
Sardinia	*Regional Law No 9 of 03/04/1994, Standards for the promotion and development of organic farming*

The National Action Plan

The Finance Act 2000 established the Fund for the development of organic and quality farming. Since 2004, it has financed the national action plan for organic farming and organic products (NAP). In January 2011, the remaining funds coming 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 euro earmarked for actions 2.3 "Inter-profession Support" and 2.4 "Initiatives to support producer organisations", whose list of those eligible for funding was approved by Ministerial Decree of 25 July 2011, No 14492.
There are several initiatives with resources allocated to the regions through the NAP, for a total amount of 4.7 million euro for promotional activities to be carried out through measures 3.1 "Promotion of bio in collective organic catering" and 3.2 "Promotion of bio to the citizen-consumer". The forms of the initiatives implemented by the regions are available on the SINAB website, including "P.RI.BIO Organic Food Promotion", launched in July 2011 by regional AIAB sections in Campania, Basilicata, Calabria, Puglia, Sardinia and Sicily, to propose new ways of promotion in the area along with issues of consumer health and the culture of sustainability, and the more recent "Roads to Bio: educational and gastronomic paths to explore organic excellence in Umbria", setting up a temporary association led by AIAB Umbria, to exploit regional organic production with direct recourse to primary produce and to raise awareness in schools.

Actions activated with the National Action Plan, 2008-2009

Axis 1 – Penetration on world markets 1.1 Promotion on international markets 1.2 Creation and strengthening of international networks	**Axis 3 – Increase in domestic demand and institutional communication** 3.1 Promotion of bio in collective organic catering 3.2 Promotion of bio to the citizen-consumer 3.3 Training courses on topics of strategic interest.
Axis 2 – Organisation of supply chain and trade 2.1 National organic seed plan 2.2 Scientific support, processing and implementation of Community regulations 2.3 Inter-profession support 2.4 Initiatives to support producer organisations	**Axis 4 – Strengthening and improving the institutional system and services** 4.1 Institutional provision of information in the sector 4.2 Administrative technical support for organic from the competent Authorities 4.3 Computerised management of sector data 4.4 Data management on inputs 4.5 Expanding analytical controls

8. The regional case: Emilia-Romagna

The focus on organic farming in Emilia-Romagna has a long history: the first Italian experience of school catering with organic-Mediterranean diet was begun in Cesena in 1986, while in Fidenza (PR), in 1994, a group of families formed the first Italian joint purchasing group (JPG) for bulk purchase of organic food. The local spread of organic has been driven by agri-industry's interest in the sector and, in particular, the localisation in the region of the Granarolo group of Bologna, which, launched the "First Nature Bio" line in 2000.
The regional administration has set specific rules for the sector since 1993, updated by the current regional law August 2, 1997, No 28, subsequently joined by rl November 4, 2002, No 29, for nutrition education and the use of organic products in school meals. This legislation established a practice that has continued for years, aimed at finding solutions to create economies and to support the organisation of supply chains.
The development of organic farming in the region has been driven by policies to support farms with agri-environmental measures implemented as part of the reg. (EEC) No 2078/92 and, subsequently, with the RDP measures under the rural development policy; in fact, the region's commitment during the last twenty years to the organisation and promotion of the organic sector - making Emilia-Romagna an example at the national level - has translated into concrete activities aimed at identifying actions and pathways that ensure the continued existence and development of farms in the organic sector and to strengthen consumer trust in their products. These range from communication campaigns to the involvement and/or institutional support in EC and national research projects; from economic contributions to support for farmers' markets, to funding for local measures to encourage the use of organic products in public catering; from the promotion of sustainable food education courses to support for forms of social cooperation.

Surface and farm types

With 7.2% of the region's agricultural area under organic farming and 3.7% organic among the total number of farms surveyed, Emilia-Romagna is the top region in Northern Italy for the number of organic operators, more than 3,500 in 2010.
In 2009-2010, regional organic agriculture maintained its position, thanks to the growth of domestic demand and the strong expansion of the short chain and direct sales of organic products. This in spite of, on the one hand, a general decline in the primary sector and, on the other hand, the erosion of households' purchasing power.
The largest number of organic farms is in the foothills,

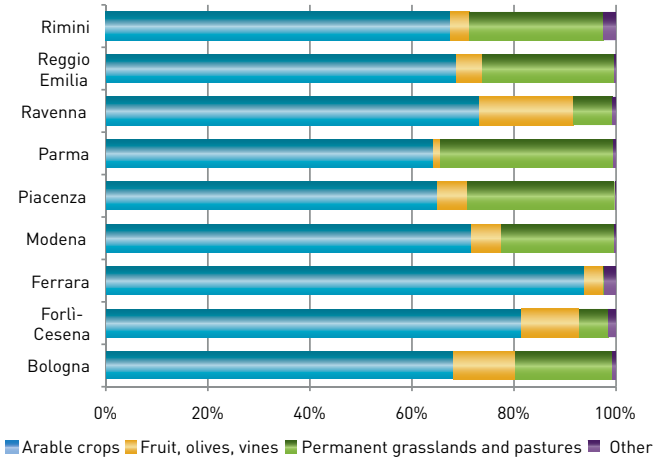
Tab. 1 - Organic operators (n.), 2010

	Emilia-Romagna	North Italy	Italy
Producers	2,709	7,854	41,807
Processors	772	2,698	5,592
Exclusive importers and other mixed operators	59	225	264
Total	**3,540**	**10,777**	**47,663**

Source: processing of SINAB figures.

hills and mountains, confirming the most common types of crops, with land mainly planted to arable crops and grassland pastures, with the exception of a few municipalities in the provinces of Ravenna, Ferrara and Forlì-Cesena, areas that historically have a large number of organic farms. The highest concentration of arable crops, according to the regional 2009 figures, is in the province of Ferrara, while the Ravenna area specialises in fruit.
While 61% of the national area planted to organic in 2010 was planted to cereals, fodder, grasslands and pastures, in Emilia-Romagna this percentage rises to 84%. Other prevalent organic crops are vegetables and potatoes (4% of the total), fruit (3%), vines (3%) and industrial plants (2%).

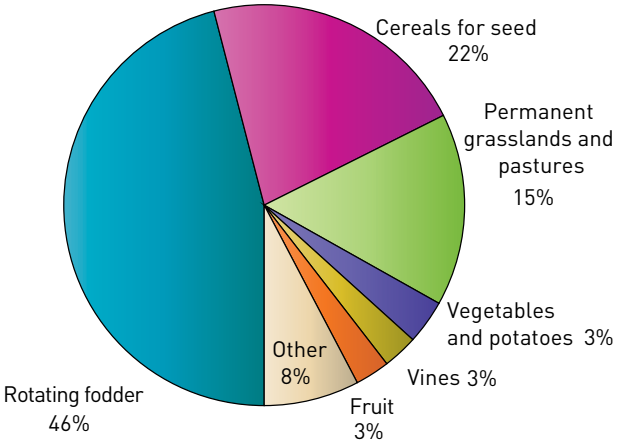
Graph. 1 - Organic and under-conversion UAA in the provinces of Emilia-Romagna, 2009



Source: processing of Emilia-Romagna Region figures.

54% of the approximately 600 regional organic farms, surveyed by the Region in 2008, raise cattle, with prevalence for beef cattle; in particular, the province of Forlì-Cesena specialises in beef cattle, while those of Parma and Piacenza specialise in dairy cattle.
In recent years, production in medicinal and aromatic

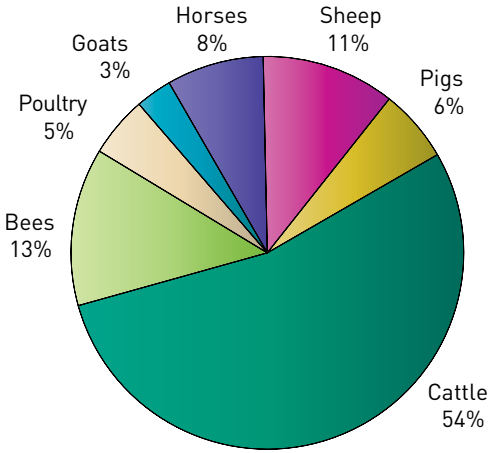
Graph. 2 - Breakdown of organic UAA by crop type in Emilia-Romagna, 2010



Source: processing of SINAB figures.

plants, also used in organic cosmetics, represents a valid alternative in mountainous and hilly areas to traditional crops that are no longer profitable, with 130 farms surveyed in 2009 and over 160 hectares planted.

Graph. 3 - Distribution of organic livestock by species in Emilia-Romagna, 2008



Source: processing of SINAB figures.

Market: organic commercial channels

The region has a widespread capillary modern distribution, with supermarkets specialising in organic products (NaturaSì) and large retail chains and consumer cooperatives, like Coop Adriatica, which has more than half of its stores in Emilia-Romagna and also deals in organic. The presence of various organic producer organisations, many of which have formed cooperatives or agricultural societies for the primary product (washing, sorting, packaging), has favoured the establishment of agreements or contracts with organised distribution to supply fruit and vegetables, dairy products and processed cereal.
New forms of logistics for organic production with short chains have also been tried in the region thanks to an initiative in 2007 by Prober and AIAB Emilia-Romagna and funded by MIPAAF. However, the proliferation of initiatives of this kind makes them difficult to monitor, because there are so many local markets and fairs selling organic products.
Different experiences of short chains feature a direct relationship between regional and extra-regional producer groups and non-local consumers (Poderi di Romagna, ReteBio, TerreBio of Modena). The territory has many well-structured joint purchasing groups which often have their own statutes; Parma, the most active province, also has several small groups of people who meet regularly to plan their purchases without a formal constitution.
Public purchases are also an interesting commercial procedure in the region, where the creation of synergies among different policy areas - agriculture, health, Regional Purchasing Agency (Intercentre) - have made Emilia-Romagna the Italian leader in collective catering, with 147 organic school canteens. In particular, the municipalities of Argelato (BO), Ferrara, Ravenna, Parma and Imola (BO) are good examples of outsourced school catering management, where the use of organic products reaches percentages of around 90%. In addition, Forlimpopoli (FC) and San Lazzaro (BO) are known for their best practices in the field of directly managed school meals. Excellent examples of public administration are the canteen at the Tax Office in Bologna, where only one supplier produces the meals,, which consists of about 90% of organic foods, and Libera Terra organic pasta, used in hospitals in Bologna and recently requested by other municipalities for public canteens.
For several years the support of the region and the participation of provinces and municipalities have made possible the consolidation of agreements and consultations with producers' associations and professional organisations, through the activation of networks in the area and participation in local projects and supply chains, not only for the inclusion of organic products in public canteens, but also for setting up local organic markets and programs of training, information and promotion for local organic products.
In particular, through the National Action Plan for Organic Farming - NAP (actions 3.1 and 3.2), the region has

Tab. 2 - Operators by type of commercial channel in Emilia-Romagna (n.), 2010

	Specialised retail	Short supply chain					Catering outside the home	
	Organic shops	Farms with direct sales	Farm Stays	JPGs	Farmers' Markets	Internet sites	Organic restaurants	School canteens
Emilia-Romagna	114	365	168	70	34	23	46	147
% to total Italy	10	15	13	9	18	15	19	17
Italy	1,163	2,421	1,302	742	222	152	246	872

Source: processing of Bio Bank figures.

received funding for promotion in catering (62,000 euro) and for citizen-consumer research (almost 94,000 euro), created in 2011 under the aegis of "Organic for all: organic in Emilia-Romagna".

Farm support

Under the policy of rural development, the promotion of organic farming becomes an across-the-board priority in all axes of the RDP 2007-2013, although it is in the first two axes that it acquires its specificity. Measures of sector support are provided, first, to introduce and maintain organic production (Axis 2, Measure 214 - Agri-environment payments), with priority given to areas with high environmental interest. In addition, organic farms have priority access, under Axis 1, to both Measure 132 (Participation of farms in food quality schemes) to cover part of the cost of certification, and Measure 133 (Information and promotion of quality products), in the latter case via associations or consortia. Also under Axis 1, the RDP calls for a specific budget for the organic sector within supply chain projects. Four have been activated, with a budget of over 2.2 million euro, favouring the territorial and thematic concentration of measures and the aggregation of beneficiaries.
Measure 121 (Modernisation of agricultural holdings) allows, only for spelt and organic production, measures in structures and equipment for preparation, processing and marketing, and, with respect to DOC and DOCG wines, organic production is given priority. Moreover, in assessing farm development plans submitted by young farmers (Measure 112), Emilia-Romagna, for the purposes of determining the amount of the payment, gives a higher score to organic farming among quality systems in which they may participate.
Organic farms in Emilia-Romagna received larger average regional contributions than those for conventional farms, confirming its institutional attention to the sector. In the first two years of the 2007-2013 programming period, the RDP made loans of more than 26.7 million euro to 2,213 organic farms; 25.7% of organic farms also received 35.8% of the total of disbursed funds, for various entitlements. In 2008 alone, the aid given affected 42,000 hectares of organic surface, 62% of which is occupied by fodder, half for livestock supply chains. New opportunities for strengthening the sector resulted from reinforcing certain parts of Measure 214 "Agri-environment payments" and organic livestock farming, from funds made available by the Health Check. Aid increased by 10%, in fact, for arable crops and fodder and supplemental payments provided for holdings with organic farming and for farms located in Natura 2000 areas.
The organic farming action, finally, is combined with two other actions in Measure 214 regarding "crop cover to contain the transfer of pollutants from soil to water" and "protection of the heritage of indigenous breeds of Emilia-Romagna at risk of abandonment", amplifying the measure's positive impact on the environment and biodiversity.

Cooperatives

The regional context of organic farming is dynamic, with large and small organised producers and with the presence for more than ten years of the Association of Organic and Biodynamic Producers in Emilia-Romagna (ProBER), which the Region has charged with managing services of technical assistance to school catering and coordinating promotional activities of the regional organic sector at national and international levels.
Organic farms can rely on a well-developed organisation of the most representative supply chains (fruit and vegetables, cereals, dairy, wine and livestock for meat). In the sector of fruit and vegetables, in particular, there are four major producers' organizations - ReteBio, Apo Conerpo, Apofruit and Consorzio Fattorie Este - each grouping from tens to hundreds of regional and extra-regional producers; other trade organisations, such as CampiAperti, Terre Emerse, Consorzio BioPiace, Alce Nero-Mielizia, are transversal in nature, operating in multiple supply chains. For the cereals sector, Progeo is active, while for the dairy industry, Consortium Bi-

oParma stands out with regard to Parmigiano Reggiano. In the 2006-2010 period, the growth in local demand for organic products, according to regional data, has affected imports (+162.5% for regional importers; +350% for authorizations from non-EU countries; +106.7% for imported volumes) more than the domestic market, which reflects a decrease of 10.5% of area and 10.8% of operators (SINAB figures). The goal of the institutions, therefore, is to strengthen cooperation and to highlight the role of production, in particular in relation to the processing industry, logistics and distribution.

Organic payments

Cultivation under the organic method requires farmers to adopt agronomic techniques that, compared to conventional or integrated agriculture, involve significantly higher commitment because of the constraints on crop rotation and the prohibition of the use of synthetic chemicals, plant protection products and fertilisers. In general, for most crops these limitations cause a significant reduction in yield and an increase in production costs, in particular labour, and for certain products a decline in merchandise quality. Although organic production can count on a generally higher sale price than conventional products, on the whole farmers who adopt organic methods may receive a lower income than a conventional producer.

For this reason, the European Union considers it critical to support producers who adopt organic production methods, especially - at this stage of planning - through the "organic farming" action of measure 214, agri-environment payments, in the regional rural development programs (RDPs). This measure aims to provide annual payments per hectare to farmers who adopt organic production methods and are committed to following them for a period of five to seven consecutive years, compensating for changes in income resulting from the commitment and, if necessary, also covering the costs of operation[1].

Of course, to determine how burdensome a commitment is, it is necessary to compare it with what is considered the norm with regard to production techniques adopted. In fact, as clearly stated by Regulation (EC) No 1698/05 on support for rural development *"Agri-environment payments cover only those commitments going beyond the relevant mandatory standards established pursuant to Articles 4 and 5 and Annexes III and IV to Regulation (EC) No 1782/2003 as well as minimum requirements for fertiliser and plant protection product use and other relevant mandatory requirements established by national legislation and identified in the program"*. There are, therefore, mandatory standards and minimum requirements that establish the reference level, also called the baseline. For example, in the case of organic, conventional seeds constitute the baseline, while certified organic seeds, which are priced significantly higher, represent the commitment; the price differential between the two, therefore, generates an additional cost for the producer. Given the fact that organic production involves more than one obligation, the amount of agri-environment payment will be given, as a whole, as the arithmetic sum of the changes in income generated by the observance of individual commitments.

Of course, this calculation, made at the regional level and not for individual farms, is based, for each AE share, on average cost and revenue obtained from data sources of various types, national, regional and provincial and, in the absence of these, from leading sector publications and consulting experts.

To define a fair payment in relation to the commitments called for, this is differentiated by crop (eg maize) or groups of crops (eg citrus) and, depending on the RDP considered, by type of area (eg lowlands, hills, mountains), Natura 2000 areas, and the size of the holding's agricultural land. Almost all the regions have also decided to differentiate payment between introduction and maintenance of organic farming, establishing a higher

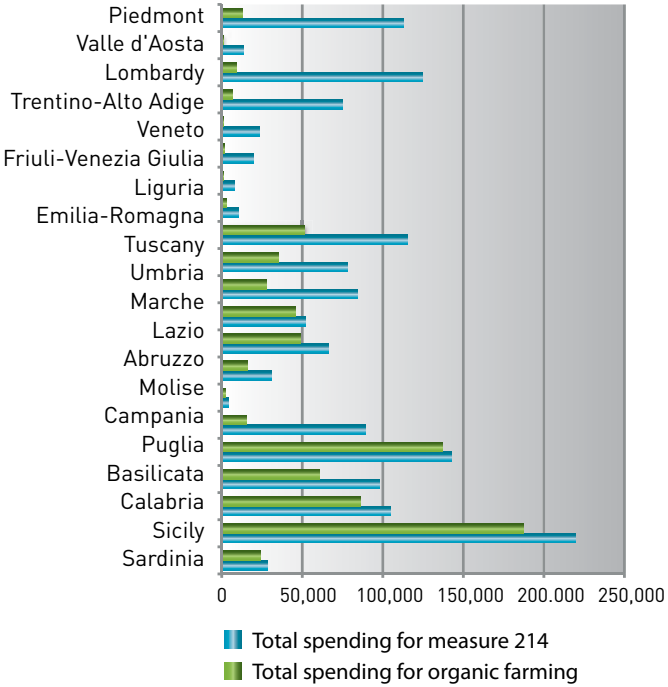
[1] *Also called "transaction costs"; operation costs are all costs not directly attributable to crop technique: for example, time spent or the actual monetary outlay to gather necessary information, make contracts, acquire the necessary skills to apply new production techniques, manage administrative aspects of contracts and maintain control of practices regarding the commitment.*

amount for the former. This is because, during the introduction of the method (conversion), the output cannot be sold as organic, and also because yields suffer significantly in the transition from conventional to organic.
The Rural Development Regulation sets payment ceilings for agri-environmental measures - 600 euro/ha for annual crops, 900 euro/ha for permanent crops and 450 euro/ha for other land uses, such as grasslands - which may be exceeded only in exceptional cases, taking account of specific properly justified circumstances.
In some cases, two or more actions of measure 214 can be applied on the same surface, giving rise to a combined payment which, however, must not exceed the limits mentioned above.
The differences between the farming systems of the regions, but also the different data sources used, the cost items considered in the calculation of the amounts and the different choices in the planning stage had a clear influence on the payment levels, causing wide variations between the calculated unitary payments. Thus, for example, it went from 96 euro/ha for grain production in Puglia to 270 in Molise, from 174 euro/ha for arable crops in Lombardy to 450 euro/ha in Trentino, from 506 euro/ha for production of grapevines for wine in Puglia to 900 euro/ha in Bolzano, Trento and Valle d'Aosta, from 270 euro/ha for olive production in Umbria to 680 euro/ha in Liguria, from 282 euro/ha for horticulture in Veneto to 600 euro/ha in other regions. In some cases, these differences are also significant between neighbouring regions: for example, the payment for olives varies from 270 euro/ha in Umbria to 500 in Tuscany and 600 in the Marches; in Calabria the payment for citrus is 600 euro/ha, while in Sicily it is 750 euro/ha.

Spending for organic farming in rural development policy

In the 2007-2013 period, in Italy, total government spending (Community and national shares) programmed for measure 214 reached 3,950 million euro, representing 22.4% of public expenditure on all the measures implemented by the regional RDPs[2]. With regard to the expenditure made, however, the data of the 2011 Annual Reports of the execution of the 2007-2013 RDPs, which show cumulative values from 2007 to 2011, show a total expenditure for organic of approximately 780 million euro, more than half (51%) of what was paid for the agri-environment measure (1,500,268 euro) in the same period.
The share of organic farming payments to total expend-

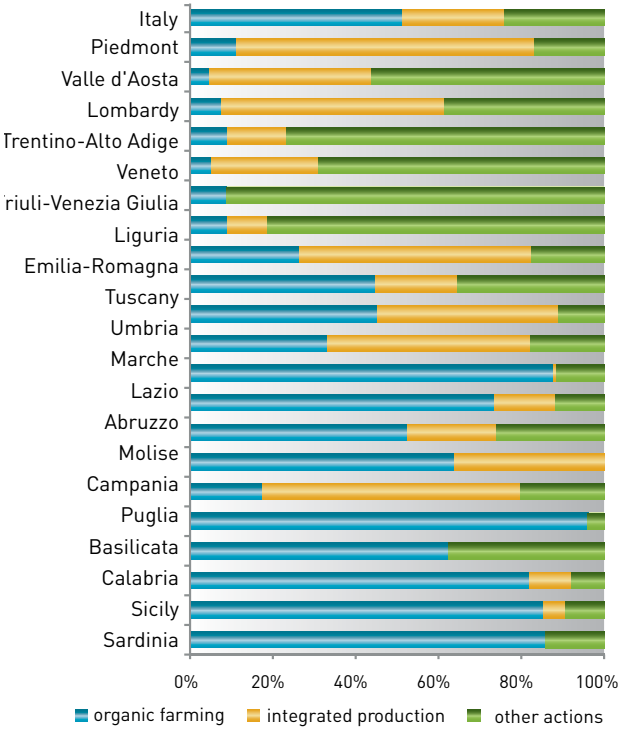
Graph. 1 - Public spending for agri-environmental measures and organic agriculture action ('000 euro), 2007-2011



Source: processing of annual implementation reports of RDPs (2008-2012).

[2] *It must be considered that, whereas measure 214 is fully funded by public resources, many measures in Axis 1 and Axis 3 also receive private funding.*

Graph. 2 - % Breakdown of spending by agri-environmental measure, 2007-2011



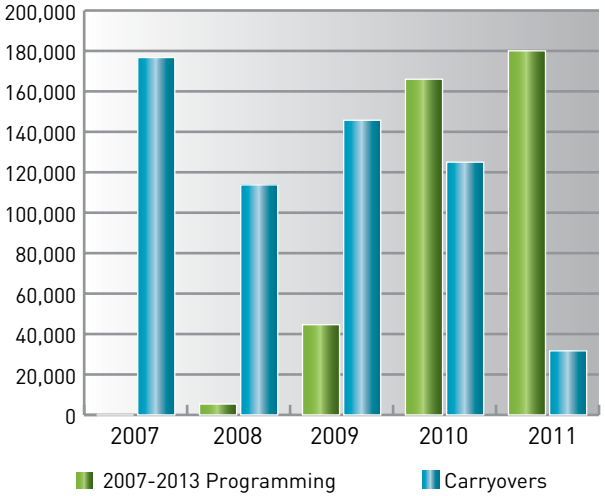
Source: processing of annual implementation reports of RDPs (2008-2012).

iture for measure 214 varies in the 2007-2010 period from region to region. In the northern regions spending in favour of organic makes up a limited extent of the total agri-environment expenditure, while in the central and southern regions it plays a significant role, exceeding 80%: this was the case in Calabria, the Marches, Sicily and especially Puglia, where agri-environment expenditure comes almost entirely from payments to organic production (93%).

The data in the annual implementation reports does not identify the number of farms receiving aid. These data, in fact, show the cumulative number of contracts, without detailing contracts carried over from the previous programming. If we were to consider only the number of contracts in the new programming period, we would exclude organic farms still receiving the payment under the 2000-2006 programming (carryover), while considering both contracts (carryover + new programming) organic farms would be overestimated, as farms which have more than one contract would be counted twice: one as a carryover of an expired commitment and the other with a new commitment in the 2007-2013 programming period. Therefore, calculation cannot be made for the level of average payment per farm, and one can only illustrate the amount of resources spent in favour of organic by programming period, year and region.

As for regional distribution, note that more than 60% of the total expenditure paid for the "organic farming" action in 2007-2011 was concentrated in Sicily, Calabria, Puglia and Basilicata, regions with greater organic surface than the others.

Graph. 3 - Public spending for organic agriculture action ('000 euro)



Source: processing of annual implementation reports of RDPs (2008-2012).

However, it should be noted that the carryover of payments from the 2000-2006 programming period rep-

Tab. 1 - Regional public spending for organic farming ('000 euro)

	2007		2008		2009		2010		2011		2007- 2011	
	New Program-ming	Carryovers	New Program-ming	Carryovers	New Program-ming	Carryovers	New Program-ming	Carryovers	New Program-ming	Carryovers	New Program-ming	New Program-ming
Piedmont	0	3,670	1,218	645	3,846	1,416	1,587	262	4,313	140	10,965	6,133
Valle d'Aosta	0	289	0	0	2	28	293	48	653	12	949	377
Lombardy	0	3,197	0	607	2,222	328	2,971	25	0	6	5,192	4,162
Liguria	0	1,288	49	126	12	935	114	235	197	956	372	3,540
Alto Adige	0	1,446	645	7	3,071	0	1,558	0	2,649	0	7,923	1,453
Trentino	0	438	183	24	203	0	376	0	199	0	962	462
Veneto	0	0	0	0	875	0	856	0	1,861	0	3,592	0
Friuli-V.G.	0	42	0	0	253	0	328	0	641	0	1,222	42
Emilia-R.	0	15,338	0	7,615	5,311	4,498	12,997	5,804	7,365	2,259	25,673	35,514
Tuscany	0	13,425	0	2,934	5,118	6,345	5,682	1,656	7,467	734	18,267	25,094
Umbria	0	0	439	14,329	3,122	6,171	2,717	1,186	2,152	1,578	8,430	23,264
Marche	0	11,608	0	7,664	6,262	8,412	8,317	3,398	11,140	342	25,720	31,423
Lazio	0	9,207	2,852	1,002	11,260	2,292	22,256	77	19,113	29	55,480	12,607
Abruzzo	0	3,528	0	2,382	1,939	2,666	3,133	2,637	2,063	76	7,135	11,289
Molise	0	400	0	360	0	494	0	1,379	742	0	742	2,633
Campania	0	3,091	0	1,518	1,112	2,454	5,452	2,005	3,939	80	10,503	9,147
Puglia*	0	24,485	0	16,154	0	24,364	18,315	53,681	26,654	0	44,969	118,684
Basilicata	0	6,585	0	25,787	0	15,893	0	12,641	3,300	11,719	3,300	72,625
Calabria	0	19,095	0	17,154	0	18,255	18,372	13,058	31,868	7,215	50,239	74,776
Sicily	0	50,995	0	12,768	0	46,222	53,339	24,165	48,066	6,347	101,405	140,498
Sardinia	0	8,511	0	2,658	24	4,191	7,354	1,446	5,665	198	13,043	17,004
Italy		**176,639**	**5,385**	**113,732**	**44,632**	**144,964**	**166,018**	**123,702**	**180,048**	**31,690**	**396,083**	**590,728**

[1] *For 2011 figures on carryovers for organic action are not available.*

Source: processing of annual implementation reports of RDPs (2008-2012).

resents 60% of total public expenditure. The spending progress on new programming is characterised, however, by a slowdown compared to spending progress for 2000-2006, due to several reasons: the delays accumulated during the planning process of the RDPs,, so that in 2007 there was no spending, or non-activation of call for the submission of applications for aid in the first year of programming (Basilicata, Calabria, Molise, Puglia) and, finally, to the delays in the payments.

Since 2010, however, spending on organic farming in the new programming period has accelerated: the total amount disbursed for the 2010-2011 period, approximately 346 million euro, is, in fact, 87% of the total amount paid in the 2007-2010 period on new programming alone.

The regions that stand out in the new programming for the greatest amount of resources disbursed for organic farming are Sicily, Lazio and Calabria; following these, with spending of more than 20 million euro, are Puglia, Marche and Emilia-Romagna, in that order.

The good spending capacity for organic agriculture in the regions and autonomous provinces appears to be very important in this moment for the further expansion of the sector. In this sense, the strengthening of expenditure also involves the improvement of strategies defined in the RDPs. Some regions, for example, have set themselves the objective of sustainable organic farming across the three Axes of rural development, giving organic farms priority access to other measures, or have favoured integrated supply chain projects focusing on organic or by territory, specifically involving sector operators in local development strategy.

10. Organic farming in the CAP reform

The proposed reform of the CAP that will carry Community farming to 2020 tends to increase the relevance of environmental aspects in supporting the primary sector, thereby strengthening the role of organic agriculture.
The latter, in fact, represents a system of agricultural production aimed at ensuring the protection of the environment and conservation of natural resources, including a high level of biodiversity, consumer health and welfare of farm animals. It is, therefore, a production method fully consistent with the objectives of the new CAP program; in addition to protecting the environment and the rural economy, it is designed to meet the demand for products of high standards of quality, hygiene and health.
Reinforcing the trend towards agricultural production attentive to environmental issues is made explicit in the two pillars of the CAP through two different forms of support. The new architecture of EU support provides, in fact, direct payments that tend more than previously to remunerate the production of specific public goods, primarily environmental, and create the best synergy with the traditional measures in Pillar 2.
From a preliminary reading of the documents relating to the new CAP, the outlook for organic farms is generally positive, although a definitive judgment will have to wait for the outcome of negotiations at the European level and the final draft of Community regulations.

Organic farming in Pillar 1

The proposed regulation provides for direct payments, as well as a basic, important component of support, called greening, which constitutes 30% of the national annual budget ceiling. This greening of direct payments, represented by agricultural practices beneficial for the climate and the environment, goes beyond the current basic elements of conditionality and, together with them, is the baseline for access to agri-environment measures in Pillar 2.
Greening calls for three different agricultural practices that are beneficial for the climate and environment, which are:

1. maintaining at least three different crops on arable farmland if the latter occupies more than 3 hectares and is not entirely used for grass production (sown or volunteer) or entirely left fallow or entirely planted to flooded crops (rice paddies) for a significant part of the year;
2. maintenance of existing permanent grassland on farms;
3. the presence of an area of ecological interest on the holding's agricultural land.

Specifically, the three actions listed above imply, respectively, that:

1. each of the three crops must cover at least 5% of the UAA of arable land and no more than 70% of the same;
2. farmers are allowed to convert no more than 5% of their eligible surfaces (those declared in the first application in 2014) to permanent grassland;
3. each farm, in order to access the payment, must have areas of ecological interest, ie fallow land, terracing, landscape features, buffer strips and areas reforested with aid from the current RDP involving at least 7% of eligible hectares, excluding permanent grassland. The precise definition of these areas has yet to be made.

Of particularly interest is the automatic right of access to payments for greening granted to farmers who meet the requirements of Article 29, paragraph 1, of reg. (EC) No 834/2007 on organic production and labelling of organic products. From this, in fact, it can be seen that the EU recognises the organic production sector as being sufficiently important, in terms of environmental protection

and sustainable production, to be considered a priori as already complying with the obligations of greening, unlike for conventional farms.
This approach, if maintained in its fundamental lines, could give a boost to organic farming especially in lowlands, which have previously been penalised in the spread of this practice due to the greater profitability of conventional activities. This may help to increase the range of products and consequently the productive potential of the organic sector in Italy.
Concerning the amount of funding provided by public support, it should be noted that, thanks to the current terms of greening, organic farms would take full direct payments without any additional obligation. Together with available aid in Pillar 2, it could lead to a "pull" towards conventional farms, thus broadening the range of Italian products in this market, where demand is growing, despite the contingent situation of economic crisis.
If we were to assess the total funding available to organic farming, we would have to consider that, in the reform, in Italy, the average direct payment per farm is estimated at 300 euro, so the amount potentially paid to organic farms for greening would amount to about 3.8 million euro[1].
Note also that in the current CAP organic farms have been, in some way, penalised with regard to direct payments. These, in fact, have been established on the basis of a three-year period in which organic farms have still had to comply with production standards that provide for the mandatory inclusion of crop rotations and soil-improving crops and fodder, and prohibit close rotation of soil-depleting and reseeding crops. This has, in fact, limited the "rights" to aid, which turned out to be much lower in number and in value than those received by conventional farms with similar characteristics of size and production type. The planned reform of the CAP can finally mitigate the effects of the application of this mechanism to calculate and assign a greater value to farms engaged in production systems that respect the territory and have lower environmental impact.

Organic farming in Pillar 2

Similar to Pillar 1 of the CAP, where removing the greening requirement from organic farming could lead to an advantage for farms hardest hit by these requirements, particularly for seed, Pillar 2 (rural development) also favours organic farming.
First, it is necessary to point out that the reform proposal for Pillar 2 of the CAP calls for a radical change in its organisation, no longer based on four axes but on a menu of possible measures that refer to the six priorities of the European Union. Regarding organic farming more specifically, there is a separate article (Article 30 of the proposed Regulation on support for rural development), disconnected from other types of production affected by agri-environment-climate payments (Article 29 of the Regulation), which acknowledges the specific identity of this production method.
The adoption of a specially designed article is an explicit commitment to rewarding adherence to organic production, recognising the higher costs that farms face to arrive at the finished product; as in the current planning stage, compensation will be made for lost income and higher costs - in whole or in part - in converting from conventional to organic production methods, with a baseline (ie conditionality commitments to be met for access to environmental measures and those for areas subject to natural or other constraints) given only by rules of conditionality and not those of greening, which, instead, will be part of the baseline of the "agri-environment-climate" measure. In the cited article, however, no mention is made of livestock production, which suggests awarding support for organic livestock farming through a higher payment per hectare in the presence of organic crops for animal feed, always respecting the maximum

[1] *The right applies potentially to 41,811 organic farms, with surface of 1,096,889 hectares, of which 760,145 ha are planted to grasslands and pastures, 23,407 to horticulture, 222,127 to fruit, 52,812 to vines and 38,400 fallow (SINAB figures as of 31.12.2011).*

herd density established in reg. (EC) No 889/2008 (170 kg of nitrogen per year/hectare). The commitments perhaps may still be expressed in different units (eg LSU), subject to compliance with the annual ceilings set out in the Regulation on Community support for rural development, similar to that established in the current implementing reg. No 1974/2006, Art. 27, paragraph 9. It is worth noting, moreover, that the article makes no reference to beekeeping, an important area of organic production.

Again, the adoption of a separate article for organic farming suggests that this measure should provide a specific economic endowment, tailored to the needs of Italian organic farms, as well as a sufficiently differentiated level of payments for less demanding forms of production in terms of cost and with less effect on the environment (payments through the agri- environment-climate measure). It is worth recalling, in fact, that in the current programming, the level of payments for organic production has in some cases provided poor incentives compared to the level set for other actions in measure 214 (agri-environment payments) and is vastly uneven among regions, problems which need to be addressed in the new programming period. It should be emphasised that the new arrangement, in itself positive, can only work if properly funded.

Finally, in rural development, a measure still covers the costs of enrolment in quality schemes for agricultural products and foodstuffs, though only for farms that joined recently. This measure follows the pattern already implemented in the previous programming with measure 132. It is hoped, however, that it can be extended to organic farms already in the system of control and that simpler procedures for application and investigation can be implemented, also in view of the fact that contributions are very limited compared to the heavy administrative burdens involved.

Relationship between the two pillars

As already seen, the first thing to notice about the relationship between Pillars 1 and 2 as regards organic farming is that the new measure in favour of this method of production proposed under rural development provides a baseline of payments limited only to compliance obligations, unlike the measure "agri-environment-climate payments", which adds the greening obligations set out under Pillar 1 (with a consequent reduction of the payments). It is also possible that the new program can lessen the effect of competition from integrated farming, as soon as the Directive on the sustainable use of plant production products is fully implemented at the European level. In fact, it could mean that, where the directive is transposed and implemented by mandating the rules for integrated production, these constraints would fall within compliance, again within Pillar 1, for which the measure could no longer be funded.

In terms of criticality, note the risk of a future halt by the Commission on the activation of the new measure in the organic RDP in the absence of demarcation and declaration of compatibility and consistency with the greening in Pillar 1.

This stems from the fact that an organic farm would receive two payments for the same commitments, both for greening and as a measure of the RDP. However, it should be borne in mind that in the first case, it should be to reward the delivery of public goods, and in the second, would compensate the lower income and higher costs incurred in the adoption of this method of production. It would be hoped, therefore, that the text of the basic regulation (or the implementing acts) would explicitly show the *ope legis* accumulation of the two payments, without deferring verification to the long and complex process of negotiations on the RDP, as was the case in the current programming. This would ensure greater consistency in the application of the organic farming measure among Member States and among regions without distorting effects on competition.

In the alternative, accumulation would be negotiated in the planning stage with the Commission and defined once and for all at the national level, as part of the general criteria to be approved with a possible national

framework for the organic measure.
The above is certainly valid, however, for the demarcation between the measures for organic farming provided in the environmental actions of the operational programs of the fruit and vegetable CMO[2] and the new RDP measure, and should not affect any measures coupled with Pillar 1, because it seems unlikely that coupled aid would be activated on some organic supply chains, as in the current programming.
The national framework with common rules is also useful to define other critical issues highlighted in the current programming, such as the low level of heterogeneity of payments among regions. These problems could be avoided by setting up a national range in the level of payments for homogeneous areas in terms of soil and climate on an inter-regional scale.
Although it is in continuity with the current program, the maximum amount of payments provided for in Annex 1 of the proposal for a Regulation on support for rural development, plus 20% for additional transaction costs, may, in general, not be particularly attractive, except for the possibility of raising the payments to 30% in the case of collective actions similar to the agri-environment-climate measures, obviously again in compliance with the limits laid down in the Regulation.
It should also be noted that so-called thematic subprograms (which correspond to sets of measures of the current programming, consisting of a set of measures to which an individual farmer can adhere jointly) do not cite organic, and there is no explicit reference in favour of organic livestock.

Tab. 1 - Amount of support for organic farming (euro)

Crops / land use	Maximum amount per ha / year
Annual crops	600
Specialised perennial crops	900
Other uses of soil	450

Source: Proposal for a Council Regulation on support for rural development for 2014-2020.

[2] *Environmental actions that can be funded through operational programs called for in the fruit and vegetable CMO (regs. (EC) No 1580/2007 and 1182/2007) are many and of various types, ranging from support for integrated or organic production to specific operations, such as farmland analysis and fertilisation plans, inputs and low-environmental-impact machinery, adjustment of sprinklers, eco-friendly waste management and packaging and so on.*

11. Training and services for organic farming

In Italy, the policy of training and consulting in the field of organic farming is carried out through various channels, primarily the European rural development policy 2007-2013, with measures 111 - actions in the field of vocational training and information, 114 - use of advisory services by farmers and forest entrepreneurs, 115 - setting up of advisory, relief and management of farms and, secondly, some initiatives undertaken by various bodies, public (local institutions, agricultural development agencies) and private (support associations, sector organisations, etc.).

All regions[1], with the exception of Friuli Venezia Giulia, have implemented measure 111; most of them benefit public/private organisms listed in special registers and accredited by the regions themselves, which are periodically required to present a plan of training initiatives to be submitted to the competent bodies for approval. Although, in the measure 111 schemes, only Liguria, Lazio, Basilicata and Sardinia refer explicitly to organic farming, a survey shows that, in 2011, other Italian regions implemented or funded training and information initiatives on organic and biodynamic agriculture through this measure. The most active is Piedmont, which has financed 11 training courses on - in addition to the principles and basic techniques of organic and biodynamic farming - viticulture, horticulture and nutritional aspects of organic products. Again within measure 111, seven information activities were organised to deal with various topics, including organic aquaculture, the distribution of organic products in large-scale retail, development assistance with the "Project ISI BIO" for defining a path of growth for farms in the organic sector in the Province of Turin. In terms of information, however, the Agribio Piedmont association, in collaboration with the Department of Agriculture of the Region, has provided farmers in every province with a free information desk, to receive technical, managerial, regulatory news and updates, etc., and retrieve information materials on various issues related to the sector. Also in Piedmont, outside measure 111, the Reference Centre for Organic Farming (CRAB) organised two information days on organic farming, while AIAB organised a first-level course (basic technical) in organic agriculture.

In Veneto, the list of training projects funded through measure 111 in 2011 includes only two related to organic issues (sustainable agriculture and product quality and training for environmentally-friendly production for SMEs); however, the Veneto Agriculture regional agency, in addition to organising a seminar on the control system of organic production in the region and one on aquaculture, held a training course in e-learning opportunities for organic farming (sale, distribution, processing, etc.) and an update course on organic livestock. Also in Veneto, AIAB organised a course, which ended in May 2012 and was also directed to technicians, related to the experiential traveling school in organic agriculture. Also worth mentioning are a course on horticulture and a seminar on viticulture, prepared, respectively, by the Casa Bortolo and the Association of Winemakers and Wine Technicians, and a follow-up meeting for organic growers on fruit scab developed by the S. Michele all'Adige Agrarian Institute. Finally, in the province of Treviso, the Arianova association gave a course on basic organic viticulture aimed at professionals and viticulture enthusiasts.

In Lombardy, organic farming initiatives financed under measure 111 only included information measures relating to the publication of specific information on organic farming on the site www.labuonaterra.it and the publication in Biolombardia News Project of information for organic farming - 2011. Other initiatives outside measure 111 were organised by AIAB, which created a course in

[1] *In Tuscany, the measure only calls for information and updating, as training is the exclusive jurisdiction of the POR CreO FSE (p. 111 RDP). Valle d'Aosta has implemented measure 111 through State Aid.*

technical basics of organic farming and a series of information sessions (horticulture, cereal production, multifunctionality, land and environment) on the potential of conversion to organic farming in the province of Milan.
In 2011, under measure 111, the Autonomous Province of Trento financed three projects in the field of organic agriculture. The first, "cultivation, harvesting and primary processing of medicinal plants for the production of herbal food products and mixtures", falls under action 1.2, concerning training in agriculture and forestry; the second initiative concerned organic horticulture and was implemented through Action 1.3 - Training actions in the field of agri-food and environment. Under action 2.2 - Seminars for farmers and foresters, however, two seminars were held, entitled "Towards organic viticulture?" to present the experiences of growers who have committed to the Protocol of Conduct in the wine sector in Trentino (which provides, inter alia, the application of the technique of integrated pest management and organic production).
In Emilia-Romagna the implementation of measure 111, together with 114, provides for the delivery of training, information and consulting services contained in the contract proposals of the "Green Catalogue", all the training, information and advice promoted by the region and addressed to farmers and foresters. The activities of the catalogue, proposed by various organisations and companies, are approved by the Region, and the farms concerned, pending participation in special provincial bids, become eligible for grants for the purchase of services. Training in organic farming in the catalogue refers only to the offer "Introduction to biodynamic agriculture" which, in 2011, appears in the eligible applications for funding in the provinces of Bologna, Ferrara, Modena, Ravenna, Forlì-Cesena and Rimini. There are a total of six information initiatives in the field of organic farming in the catalogue and regard, in particular: homeopathy in animal husbandry and agriculture; basic, advanced and in-depth information for organic farms and their management. Outside measure 111, the "Mothers" foundation organised a series of short courses on various aspects of biodynamic agriculture (setting up and using preparations, animal husbandry, viticulture). Of note, finally, the conference "Organic Agriculture and the challenge of climate change" held during the 23rd edition of SANA.
The Marche Region also provides beneficiaries of measure 111 with training services from a special "Catalogue of training offers", which contains seven proposals on organic farming. In 2011 the training course "Environment-friendly and Organic Agriculture" was held. As in the Veneto, regional activity in organic farming is significant: in addition to two conferences (Development of organic farming and livestock in the Marches), the following activities were organised: "Today we eat BIO", part of a project funded by the MIPAAF "Knowing organic in the Marches"; the presentation of the ORWEEDS project results on the application of indirect methods of weed management, organised by the Council for Research and Experimentation in Agriculture and AIAB; and a selection of expert educators in organic farming for the "traveling organic Chair Project".
The last region where initiatives on organic actions under Measure 111 were carried out in 2011 is Calabria. Here the Region, in collaboration with AIAB and ICEA (Institute for Ethical and Environmental Certification), organised a training course in the field of legislation on organic farming, particularly on Regulations (EC) Nos. 834/2007 and 889/2008; in addition, also under measure 111, there was an educational session on the risk of chemicals and REACH[2]. Finally, outside measure 111, worthy of note was a course for social entrepreneurs and organic farming organised by the Municipality of Isola Capo Rizzuto in collaboration with the Libera Terra association and the agency for agricultural development in the region (ARSSA).
Among the most active players in training and education in organic farming organised in the Italian regions

[2] *Reg (EC) No 1907/2006, commonly known as REACH (Registration, Evaluation and Authorization of Chemicals).*

outside EU funding is Ce.FAB, the AIAB training centre for organic farming, whose training plan 2011 provided the organisation of several training courses. In addition to Piedmont, Veneto and Lombardy, Ce.FAB offered two courses (technical basics in organic farming) in Liguria and Umbria and a course of study of biodiversity in Tuscany and Lazio; in the latter region it also taught the course "Organic agriculture, social concepts and tools for dissemination of practices". Training and information initiatives in the organic field, outside measure 111, have also been organised by other public and/or private Italian groups. In particular, in Emilia-Romagna, FederBio and Pro.BER held a training course and refresher courses for organic farming of dairy cows; in Tuscany, a seminar organised by the Chamber of Commerce of Pisa addressed the issue of conversion of holdings to organic, exploring the existing regulatory and compliance requirements. Arezzo, however, within the homonymous project funded by MIPAAF, hosted the workshop "EuVinbio" on various issues related to organic winemaking and, in Florence, viticolturabiodinamica.it organised a training course for modern biodynamic viticulture. In the Autonomous Province of Bolzano, the local branch of the Agribio association coordinated a basic course in biodynamic agriculture and one in biodynamic horticulture. As for Southern Italy and the Islands, Sardinia, in addition to a technical meeting on breeding of pigs organised by regional development in agriculture (Laore), held a seminar organised by the prison administration in collaboration with the AIAB, on organic and social farming in the island's penal colonies, while Sicily, within the "Project salibus", held a training course in organic agriculture for food safety within a sustainable business. In Puglia, ICEA prepared two courses in organic farming, one for technical controllers and one for expert qualification. In Basilicata, there was a course on marketing of organic products and, at the "Organic squares" event, the conference "Organic Farming, Protected Quality" was organised.

The theme of marketing, more precisely the new forms of distribution for organic food, the relevant legislation and logistics, were the subjects of two seminars, organised in collaboration with the Municipality of Rotondella (MT) and the Upper Basento mountain community, addressed to farmers in Lucania/Basilicata. The Council for Research and Experimentation in Agriculture - Research Unit of cropping systems, also coordinated a meeting regarding the guidelines for the management of weeds in organic horticulture. Finally, the Region of Campania, in 2011, in the catalogue of interregional higher education courses, provided a course for experts in organic farming, and in addition to a seminar on the importance of training in organic farming, organised the 30th international conference of biodynamic agriculture. At the national level, however, note the signing of a Memorandum of Agreement between the Ethics Bank and FederBio for the construction of a school for the training and the sharing of expertise and best practices in organic and biodynamic farming.

From the survey conducted, in the first place, only a small number of interventions were financed through measure 111. The cause can be identified in the delay with which many regions have implemented the measure (in some cases the first tender notices were published only in 2011) or the complexity of procedures, which require a very long time, such as the annual update of the list of implementers and its subsequent publication. However, although the data reported are not exhaustive, the most active regions are Veneto, Piedmont and the Marches, while the least active are Sicily and Puglia, which do not appear to have made any intervention, though they rank among the regions with the highest public spending planned for measure 111, of more than 38 and 23 million euro, and the greatest surface area cultivated with organic methods. The data also show that the largest number of educational interventions concern the acquisition of skills, indicating an interest among operators in organic farming, which should be more stimulated by "introductory" measures, such as establishing information centres specific to this method of production, to give preliminary orientation towards the sector. The interest is also shown by the dynamic nature of co-ops, which are

very active in all of Italy.
Measure 114 - use of advisory services by farmers and foresters - provides an opportunity for the farmer to take advantage of consulting services, by bodies accredited by the regions on various issues relating to conditionality. Only four regions (Calabria, Liguria, the Marches and Tuscany) indicate explicitly, in the measure sheets, organic farming among areas affected by measures. There were as yet no activities regarding organic in 2011, and this is due, probably, to the delay of the regions in completing the procedures for activating the measure and the small amount of funding, which prompted requests for consulting mainly about issues of conditionality.
Measure 115 - setting up of advisory, relief and management of farms - has been implemented in 7 regions (3 in the North, 2 in the Centre and 2 in the South of Italy). It includes the activation of services, replacement and advice to guide agriculture and forestry toward development models based on competitiveness and improving the environment and quality of life in rural areas. Also in this case there was no activity regarding organic.
Overall, although there is evident need for more training and information on organic for participants and civil society, government initiatives are still conspicuously lacking. Analysing the data on the total expenditure of the RDPs as of 31 December 2011, however, we can see that this difficulty relates to the entire field of training and information. Spending capacity for measure 111, in fact, is slightly over 20%, with little more than 40 million euro spent of over 196 million planned, while in the case of measure 114, it is just over 8% and does not reach 9% for measure 115. There is, therefore, a situation of total deficit for interventions in the system of knowledge in agriculture, which is even more serious for specific sectors such as organic, especially where technical assistance is largely inadequate.

Tab. 1 - Activities of training and information on organic agriculture by region, 2011

Region	Training							Information				
	agricultural products	livestock	aquaculture	regulations	marketing	agricultural techniques	other*	Seminars/ Conferences	Information sources	Paper/ Online publications	Events	education
Piedmont	x					x / x	x / x		x		x	x
Valle d'Aosta												
Lombardy						x				x		
A.P. Bolzano						x						
A.P. Trento	x											
Veneto	x / x	x	x	x	x	x / x		x				
Friuli V.G.												
Liguria						x						
Emilia Romagna	x	x/x				x / x		x				
Tuscany						x		x				
Umbria						x						
Marche						x		x			x	x
Lazio							x					
Abruzzo												
Molise												
Campania						x	x					
Puglia						x		x				
Basilicata					x			x				
Calabria				x			x	x				
Sicily							x					
Sardinia							x	x				

***x** = measure 111*
***x** = outside RDP*
** Specific projects; nutritional aspects; social agriculture; organic farming expert; product distribution.*
Source: INEA processing.

PART III:
ORGANISATION AND CHARACTERISTICS OF THE ORGANIC SECTOR

The activity of ICQRF in 2010

The Central Inspectorate of fraud prevention and protection of the quality of food products (ICQRF) plays a role in consumer protection and for the protection of producers from the effects of unfair competition. It also authorises the activity of control structures operating within public and private systems of production of regulated quality food, including organic, performs supervisory functions concerning the control of those structures, and has the power to issue administrative fines in agriculture and agri-food matters under state jurisdiction.

Control activities are carried out throughout the production chain of agri-food products, including organic (food processing, storage, transport, trade, import), to verify the quality, authenticity and identity of food products and agricultural production inputs, and to combat illegality and fraud in marketing.

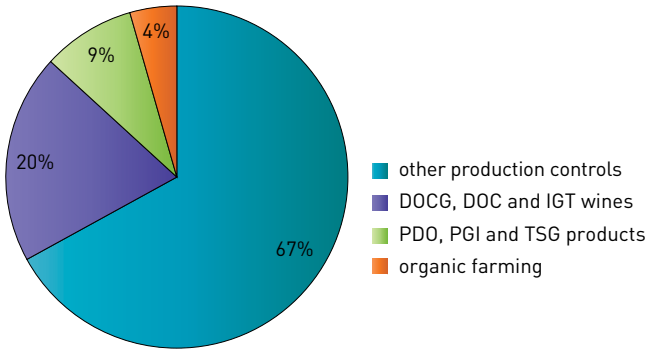
During the inspection activities, samples are also collected for analytical control, complementary to inspection, in order to verify the qualitative and quantitative makeup of products and their compliance with the requirements of the law and what they claim to be.

Given the particular importance of regulated quality products in the Italian context, the ICQRF devotes more than 30% of its annual monitoring activities to them.

In 2010, within the framework of organic production, the ICQRF conducted over 1,200 inspections, controlling 1,150 operators and 2,000 products throughout the country. Despite a decrease in the number of inspections carried out from 2009 (approximately -25%), there was a higher average of irregularities with respect to the number of operators, representing more than 5% (+1.7% compared to 2009) and 3.8% of products tested (+0.9% compared to 2009). The fruit and vegetables and cereals sectors were the most heavily monitored: together they accounted for approximately 40% of the products tested and 45% of the samples analysed.

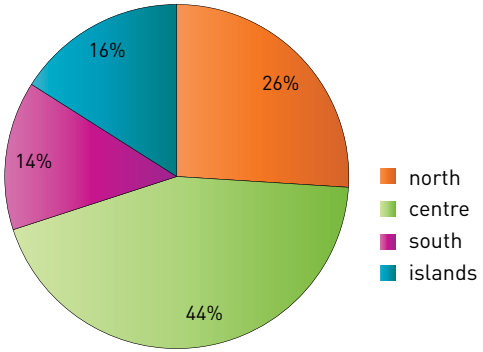
There were a total of 424, approximately 4% of which showed irregularities (a percentage that did not change compared with 2009). The greatest percentage of irregu-

Graph. 1 - Breakdown of ICQRF controls among conventional and quality-regulated productions, 2010



Source: ICQRF.

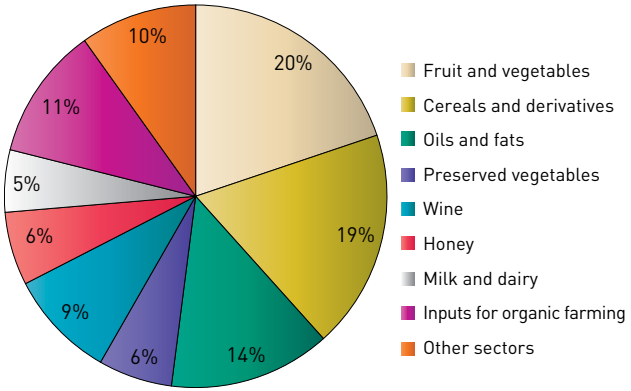
Graph. 2 - Territorial distribution[1] of ICQRF-controlled products in the organic sector, 2010



[1] *Territorial distribution refers to the site of control, not the site of production.*

Source: ICQRF.

Graph. 3 - Distribution of ICQRF-controlled organic products by sector, 2010



Source: ICQRF.

Tab. 1 - Products from organic farming controlled by ICQRF (n.), 2010

Sector	Controlled prod.	Irregular prod.	Irregular products (%)
Fruit and vegetables	396	10	2.5
Cereals and derivatives	370	11	3.0
Oils and fats	273	10	3.7
Inputs for organic farming	224	4	1.8
Wine	183	19	10.4
Preserved vegetables	125	4	3.2
Honey	124	2	1.6
Milk and dairy	105	7	6.7
Other sectors	197	8	4.1
Total	**1.997**	**75**	**-**

Source: ICQRF.

larities was found in the field of inputs for agriculture, including seed and feedingstuffs, for the presence of active substances not allowed in organic agriculture.
The activities carried out in 2010 led to the forwarding of 17 crime reports to the court, of which 30% were for

Tab. 2 - Samples analysed and irregular samples (n.), 2010

Sector	Samples analysed	Irregular samples	Irregular samples (%)
Cereals and derivatives	103	6	5.8
Fruit and vegetables	86	0	-
Inputs for organic farming	64	8	12.5
Oils and fats	49	0	-
Wine	36	0	-
Preserved vegetables	34	0	-
Honey	27	1	3.7
Milk and dairy	15	1	6.7
Other sectors	10	0	-
Total	**424**	**16**	**3.8**

Source: ICQRF.

fraudulent trading (pursuant to art. 515 CP) as a result of laboratory tests which revealed the presence of active substances not allowed in organic products. 87 administrative disputes were raised (+20% compared to 2009) and, for the most part, involved organic food with features not in conformance to the standards of the law, or irregularities in labelling (omission of mandatory indications or use of misleading information), partly as a result of the entry into force of the new EU rules on the labelling of organic products (Regulation (EC) No 889/2008).

The supervision of monitoring agencies

The supervision of control structures is exercised by MIPAAF, which works in synergy with the Regions and Autonomous Provinces pursuant to art. 1, paragraph 1047 of 27 December 2006, No 296.
The oversight function is carried out after licensing by control bodies (CBs) operating in the sector of organic production, and essentially consists in verifying that the requirements under which ministerial authorisation was issued are met, and compliance with instructions

with particular reference to the proper implementation of control plans and procedures approved by MIPAAF. At the operational level supervision is exercised by the staff in branch offices of ICQRF at CB headquarters, where a representative sample of files relating to controlled operators is checked. The control of the case files is followed by visits to the operators.
In 2010, eleven CBs located in the following regions were checked: 4 in Emilia-Romagna, 1 in Tuscany, 1 in the Veneto, 1 in Lombardy, 2 in Sicily, 1 in Sardinia, 1 in the Marches; later visits were made to operators across the country. Supervision of CB premises involved branch offices in Bologna, Florence, Conegliano (TV), Milan, Palermo, Cagliari and Ancona, while supervision among operators involved all the outlying offices of ICQRF.
The main problems encountered were: negligence in record keeping; conflict of interest of some technical inspectors (who also offered consulting to farms subject to control); incorrect application of tariff guidelines. None of these resulted in the revocation of authorisation.
The Inspectorate also, until the month of June 2010, continued control activities in place of two bodies which, from 1 January 2009, had their authorisation revoked for lack of accreditation to EN 45011/99.

Tab. 3 - CBs authorised to control organic operators

Number of reference	Denomination
IT-BIO-002	CODEX srl
IT-BIO-003	IMC S.r.l.
IT-BIO-004	SUOLO e SALUTE S.r.l.
IT-BIO-005	BIOS S.r.l
IT-BIO-006	ICEA
IT-BIO-007	BioAgriCert srl
IT-BIO-008	Ecogruppo Italia srl
IT-BIO-009	CCPB srl
IT-BIO-010	BIOZOO srl
IT-BIO-012	SIDEL Cab Spa
IT-BIO-013	ABCERT srl
IT-BIO-014	Q Certificazioni srl
IT BIO 001 BZ	BIKO - Tirol
IT BIO 002 BZ	IMO - Institut für Marktökologie
IT BIO 003 BZ	QC&I GmbH

Source: MIPAAF.

The role and tasks of inspection bodies

CBs must submit an annual control plan to MIPAAF, consisting of a schedule of checks to be performed on farms enrolled in the control system, which contains methods and timing of each stage of the process.
The type of control can be described briefly as follows:
- Type of document;
- Type of inspection carried out at the farm;
- Type of analysis, which involves taking and analysing a sample of product.

After the document type control, on-site inspection is made by qualified, independent and impartial personnel, at the farm enrolled in the control system. The inspection is intended to check the conformity of production techniques, prevent or reveal accidental contamination, take samples where violations are suspected, and proceed to analyse them in accredited laboratories to UNI CEI EN 17025 voluntary standard.
The frequency of inspection is scheduled on the basis of a risk analysis that must be provided by the inspection body, including a full audit annually, as well as any special verification, even unannounced.
If, during the monitoring activities, deviations from Community provisions and national legislation in the field of organic products are detected, inspection bodies must take action against the operator and inform the competent public supervisory authorities.
Irregularity is non-compliance with the formal aspects of the documentation provided by the legislation on organic farming, as well as in the non-application of certain provisions of specific legislation, which does not

lead to prolonged effects or could compromise the reliability of the operator.
Infringement consists in manifest breach of the obligations imposed by the legislation that could compromise the reliability of the operator and the conformity of the product.
Following the establishment of such infractions, the CB may apply the following measures:

- Recall and warning. Invitation to the operator to resolve the detected nonconformity;
- Removal of organic indication (per lot or batch of product) or prohibiting the operator to include claims related to organic farming methods in labels and documentation, for the batch or the entire production;
- Suspension of certification. Temporary withdrawal of certification of conformance to organic farming methods;
- Exclusion of the operator from the control system.

There are twelve authorised CBs operating in the field of organic farming throughout the country. In the Autonomous Province of Bolzano, there are also three active control bodies operating in organic farming, which are authorised by the Province itself.
CBs must report annually to the competent authorities (MIPAAF, regions and autonomous provinces) as follows:

- By 31 January, the list of operators inspected as of 31 December of the previous year;
- By 31 March, a report on its monitoring activities during the previous year;
- By 31 March, the list of eligible operators as of 31 December of the previous year;
- By 30 November, the proposed inspection plan for the following year.

CBs are obliged to inform the competent authorities of detected nonconformities and measures adopted to correct them.

The results of the inspection bodies in 2010

Analysis of the data provided by the CBs shows that, in 2010, compared to 48,000 notified operators in the sector, 60,000 visits were made, of which approximately 10% were unannounced, with the collection of 5,000 samples. As a result of these inspections, 12,000 irregularities and 1,500 breaches of the requirements in Community and national rules were reported. This has resulted in the application of 1,100 measures and penalties imposed on productions and 470 measures for operators. These results are in line with those recorded in 2009, with the exception of those involving operators, which declined by more than 50% over the previous year.
The measures taken on production are mainly due to non-compliance with the obligations imposed by legislation likely to affect the certifiability of organic product, after which the CBs took steps to eliminate the words "organic" from non-conforming merchandise. The measures taken against operators (suspension or expulsion) are due, in most cases, to documentary non-compliance or non-payment of the costs of inspection and certification.

13. The organic pasta category

The general framework

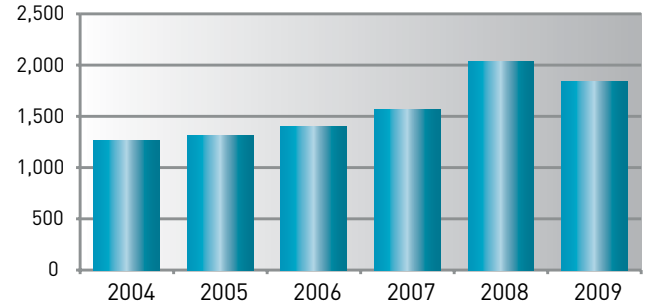
The Italian pasta supply chain involves about 250,000 farms, covering 1.4 million hectares of UAA (45% of wheat-growing area in the EU) and producing 4.5 million tonnes with a value of about 1.5 billion euro.
Durum wheat is cultivated in all regions with the exception of Trentino Alto Adige, Valle d'Aosta and Liguria; Puglia and Sicily produce more than 40% of the nation's wheat, followed by Tuscany and the Marches (with between 100,000 and 300,000 hectares of UAA).
The average yield, according to ISTAT, is 5.5 t/ha in the North, 3.6 t/ha in the Centre and 2.9 t/ha in the South.
Domestic production is not sufficient to meet the demand of the industry, which imports about 1.9 million tonnes of wheat (Nomisma) coming mainly from France, the U.S., Mexico, Canada, Kazakhstan, Spain, Greece, Australia, Syria, Turkey and Argentina.
The number of storage facilities is not quantifiable, while there are about 180 milling companies (Nomisma) and

Tab. 1 - Import and export of pasta (million euro)

	Import			Export			Balance	
	2010	2011	% change	2010	2011	% change	2010	2011
PRIMARY SECTOR TOTAL	17,826.97	20,212.53	13.38	6,836.81	7,097.88	3.82	-10,990.16	-13,114.65
of which for food	16,107.51	18,046.73	12.04	5,986.01	6,173.01	3.12	-10,121.50	-11,873.72
of which egg-based non-filled	0.33	0.63	91.80	134.10	146.43	9.20	133.77	145.80
of which non-egg non-filled	27.32	31.89	16.72	1,259.27	1,370.30	8.82	1,231.95	1,338.41
of which filled	19.82	17.70	-10.71	289.20	300.36	3.86	269.37	282.67
of which other food pasta	15.76	12.11	-23.17	130.64	147.74	13.09	114.89	135.64
PASTA INDUSTRY	**63.23**	**62.33**	**-1.42**	**1,813.20**	**1,964.84**	**8.36**	**1,749.98**	**1,902.51**

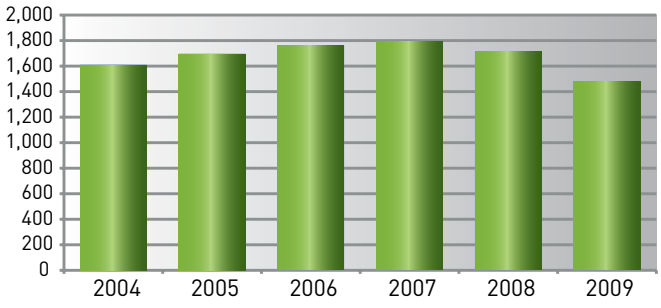
Source: Federalimentare.

Graph. 1 - Export value of pasta (million euro)



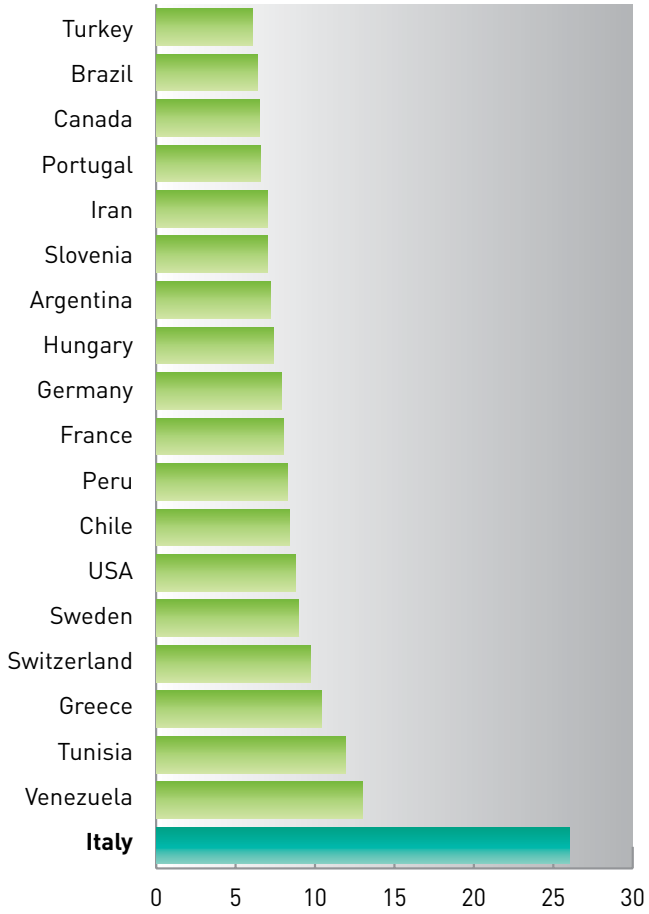
Source: Nomisma.

Graph. 2 - Pasta exports (.000 t)



Source: Nomisma.

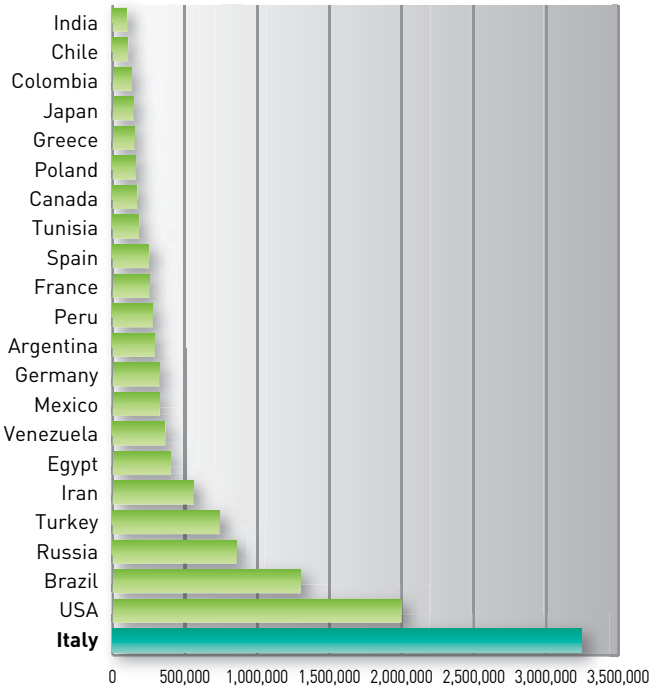
Graph. 3 - Per capita consumption of pasta (kg), 2008



Source: Survey carried out by IPO - Last update June 2011

approximately 5,900 pasta factories, of which about 125 are industrial-sized, with a production capacity exceeding one tonne per day. Production value is 6.1 billion.
The geography of global pasta consumption is not exclusively Mediterranean even though our country has the highest per capita consumption in the world (in 2010, according to data presented at the thirteenth World Pasta Day, held in 2011 in Rio de Janeiro, 26 kg are consumed per year, of which 24 kg is dried pasta and 2 kg is fresh pasta). Italy is followed, in fact, by Venezuela (13 kg), Tunisia (11.9 kg), Greece (10.4 kg), Switzerland (9.7 kg) and Sweden (9 kg).
Beyond the extent of domestic consumption and importance to gastronomic and cultural tradition, the category

Graph. 4 - World pasta production[1] (t), 2011



[1] Countries with production over 100,000 t.
Source: Survey carried out by IPO - Last Update, June 2011

is extremely important economically. As a producer, Italy is the international leader for both volume and value. According to the International Pasta Organization, our production (3.25 million tonnes in 2010) is approximately equal to the sum of the following two main producing countries (USA, with 2,000 million tonnes, and Brazil, with 1,300 million tonnes). Production is spread over 22 countries with quantities of not less than 100,000

tonnes; in the ranking of production are Italy, USA and Brazil, followed by Russia, Turkey, Iran, Egypt, Venezuela, Mexico and Germany.
According to AIDEPI (Association of Italian pasta and sweets industries), more than half of Italian production is exported at a value of just under 2 billion euro in 2011, of which 1.37 comes from dried non-filled pasta.
The export of pasta from Italy in 2011 extended to 182 countries (compared to 140 in 1991). The category is in fourth place for the value of food products, after wine, preserved vegetables and prepared meats.
The major buyers of Italian pasta are Germany (with a share of about 12% of the market), France (11%), the U.S. (11%), the UK (9%), Japan (5%) and Canada (5%).
Despite the absolute maturity of the market, domestic consumption in Italy saw a steady increase in the nineties, then showed a more fluctuating trend in the following years, partly because of new consumption habits (fast food and quick lunches, on one hand, attention to caloric intake on the other). In the period 2002 to 2009, total domestic consumption of pasta shrank on an annual average by 0.8%.
Among the different types, it can be observed that, after the exploits of 2008, due to the launch of a specific line by a leading national company, the value of whole-wheat pasta in 2009-2010 did not change; the values of dry filled pasta, semolina pasta enriched with other ingredients, and dry egg noodles decreased; instead, there was a positive trend for fresh filled pasta and dietetic pasta (especially gluten-free).
68% of sales are made in large-scale retail (hypermarkets, supermarkets and other self-service outlets reap consumer value exceeding 1.2 billion euro, corresponding to approximately 775,000 tonnes of product) and 16.5% in traditional retail (Nomisma).

Organic durum wheat

SINAB estimates that for 2010 durum wheat was grown on 89,373 hectares, of which 24,125 ha are in conversion (-24.7%) and 65,247 ha are already converted (-25.2%). Except for the lows recorded in 2003 and 2010 and the positive peak in 2005 (with more than 150,000 hectares), the total area in the past decade has been consistently between 100,000 and 120,000 hectares.
The national average yield of organic wheat has been calculated by FederBio, on the basis of information from participating control bodies, at 2.85 t/ha for 2009/2010, with peaks of increased productivity in Veneto and Puglia (respectively 4.5 and 3.5 t/ha) and lowest in Basilicata and Campania (1.3 and 1.8 t/ha).
Based on these assessments, we can estimate a total production in 2010 of about 180,000 tonnes of organic wheat, in addition to approximately 67,500 tonnes of grain in conversion, which is not used to make pasta.
The yield of semolina can be estimated at 120,000 tonnes; the use of refined semolina for the production of so-called "semi-whole-grain" pasta and whole-grain semolina raises the overall yield usable in making pasta to about 130,000 tonnes. To this amount is added, besides pasta produced in pure form or mixed with other grains (khorasan wheat, other lesser grains), durum wheat for import; SINAB estimates the amount coming from non-EU countries for 2010 at about 10 thousand tonnes (6,158 in 2009 and 12,395 in 2008); however, data on intra-Community trade are not available.
Coexistence occurs among artisan pasta makers with local distribution (whose products are found mainly in specialised shops), industrial plants dedicated exclusively to organic production and industrial plants that engage in only some cycles of organic production. On the basis of the lists published by the major control agencies, we can estimate them at about 300 units total.

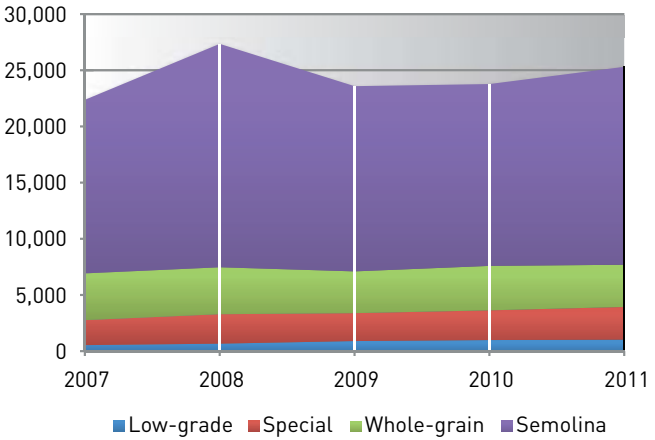
The survey

To access the main elements in the sector, a national sample of pasta makers of different size and location was selected. The sample includes: industrial companies (for which the production of organic pasta is an extension of the range, mainly intended for large-scale distribution and private label supply); industrial enter-

prises specialising exclusively in organic production (with a wider range of channels); industrial firms with organic production mainly intended for specialised retail channels (also with private label) and artisan workshops.
Businesses were given a questionnaire to investigate the volume (not value) of different types of pasta products and marketing channels.
The survey involved three entirely organic industrial pasta producers, two industrial pasta manufacturers with conventional and organic production, and two artisan workshops with only organic production. One of the industrial pasta factories produces mainly under trademark for one of the largest retail chains nationwide. In numerical terms, the sample is limited, but represents a total production of over 25,000 tonnes, or 0.8% of total national production of pasta and more than 50% of the national production of organic pasta. The results, therefore, may be sufficiently indicative of reality for the segment oriented toward both the national specialised channel and to the various international channels and conventional super- and hypermarkets.

Target Markets - The total production of organic products from the sample of firms was 25,306.5 tonnes in 2011, most of which (17,616.5 tonnes, or 69.6% of the total) was represented by wheat pasta, which from 2007 showed an average annual increase of about 3.5%.
It should be noted that seven out of ten packets are represented by semolina pasta, whereas until the early nineties the offer was made up exclusively of whole-wheat pasta, although marketed under different sales descriptions ("whole-grain specialty food", "specialties made from whole-wheat flour"), given the constraints imposed by the then-current law 580 dated 4 July 1967, which qualified as "pasta" only the product obtained by extrusion, rolling and drying of dough prepared with only semolina (or low-grade durum semolina) wheat flour and water. At the time, the product was sold in only a few hundred shops (often organised in the form of private clubs and consumers' associations, similar to today's purchasing groups) of an orthodox naturist stamp, when not macrobiotic, which did not express significant demand for refined product.

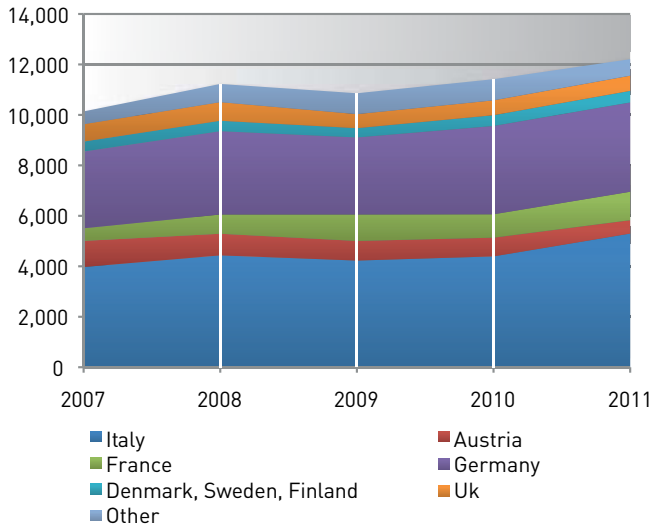
Graph. 5 - Sales of organic pasta (t)



Source: FederBio survey.

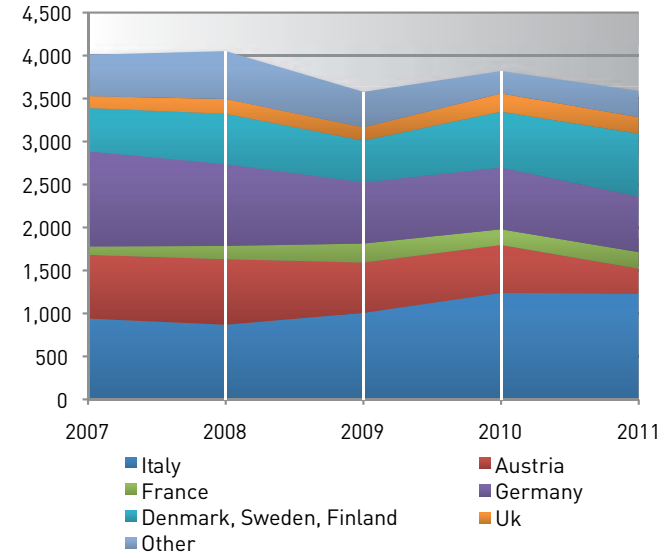
Add to semolina pasta 1,024 tonnes of low-grade durum semolina pasta (just over 4% of the total), 3,757 tonnes of whole-wheat pasta (14.8%) and 2,908 tonnes of special pasta (spelt, khorasan wheat, other cereals) (11.5% of total). Since 2007, special pasta has scored an average annual increase of about 7.5%, more than double that recorded by semolina pasta.
The main target market is the EU, which accounts for 75% of semolina pasta, all of low-grade durum semolina pasta, 90% of whole-grain and 91.6% of special pasta.
Going into detail of individual countries, Italy is the largest consumer of semolina pasta (43.4% of the EU market), followed by Germany (29%) and France with 9.2%. It is also the top consumer of whole-wheat pasta (34.3% of the total), followed by the Scandinavian countries with 20.4% and Germany with 18%.
For special pasta, the top consumer is still Italy (40%), closely followed by Germany with 36.2%, and farther behind by France, with 10.9% of consumption in the category.
France, however, is the largest purchaser of low-grade

Graph. 6 - Sales of organic semolina pasta in the EU (t)



Source: FederBio survey.

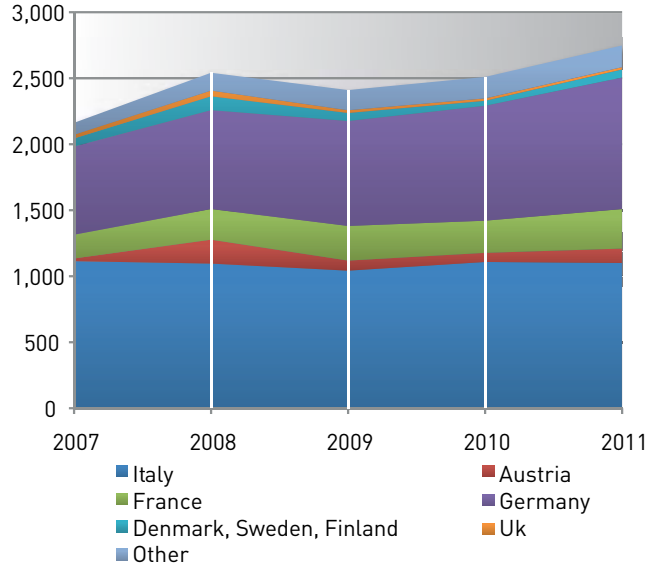
Graph. 7 - Sales of organic whole-grain pasta in the EU (t)



Source: FederBio survey.

durum semolina pasta (54.4% as against 31.4% in Italy). For semolina, other destinations (Austria, Scandinavian area, the UK and others) hold shares of between 3.8% and 4.9%; the share of the aggregate "other EU countries" for low-grade durum semolina pasta is 14.1%.

Graph. 8 - Sales of organic special pasta in the EU (t)



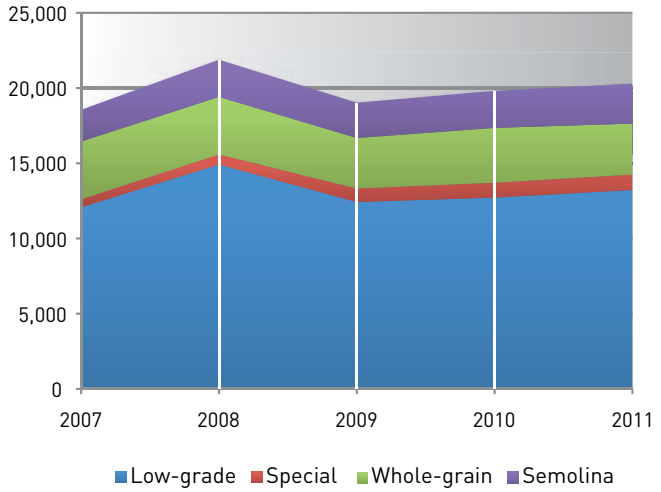
Source: FederBio survey.

North America absorbs 11.1% of the production of semolina pasta, followed by non-EU Europe (7%) and Oceania (4.8%); other areas hold residual shares.

The situation is different for whole-wheat pasta, 90.1% of which is destined for the EU market, while 3.8% of the amount produced is destined for North America, 2.2% for Asia and an equal share for the African market.

It should be emphasised, however, that the product supplied to a wholesaler in a foreign country is not necessarily consumed within the borders of the country of first destination: in fact, it can then reach the most diverse markets.

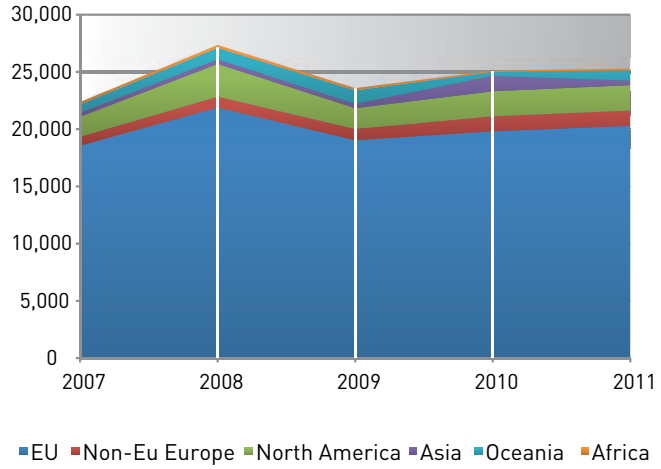
Graph. 9 - Sales of organic pasta in the EU (t)



Source: FederBio survey.

Commercial channels and use of brand labelling - 28.1% of production from the sample of companies participating in the survey is marketed under the producer's brand, while 71.9% is in private label to the customer;

Graph. 10 - Sales of organic pasta by geographical area (t)

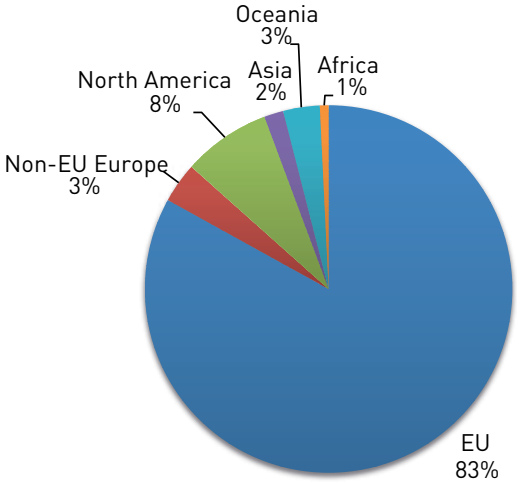


Source: FederBio survey.

this reflects the purely industrial characteristics of businesses.

One of the companies participating in the survey is a direct supplier to Italian large-scale distribution, for a product

Graph. 11 - Sales of organic pasta by geographical area, 2011



Source: FederBio survey.

volume of 9.5% of the total sample. The same company also sells 21% of production directly to foreign supermarket chains (a channel that involves, to varying degrees, all industrial companies in the sample), but 32.8% of production is destined for foreign wholesalers. The companies participating in the survey do not have information as to the final destination (specialised or large-scale retail) of the product supplied to these intermediaries.

18.1% of production of the entire sample of companies is consigned to Italian wholesalers, directly or through retail distribution affiliates; 1.2% is delivered directly to independent national retailers. The share of purchasing groups is 13.1% of the total sample (but is substantially related to a single operator, and therefore represents a more significant share of turnover); the share of direct supply to catering is 4%.

Conclusions - The gathering of information was easy for specialised industrial companies, but was somewhat difficult for those companies for which organic is only an extension of range (although with a significant share, between 6 % and 45%).
The importance of the various sales channels is influenced by the focus on organic production in corporate strategies, with a greater share in large-scale retail for non-specialised industrial companies, and, conversely, of purchasing groups for specialised companies.
The survey confirms the strong export propensity of the organic sector: 59.38% of production is destined for the foreign market.
Production volume of organic pasta in the sample of companies analysed showed an average annual increase of 3.5% from 2007 to 2011, approximately three times the growth rate for the pasta sector as a whole.
The product category with the greatest share in the category is durum semolina pasta (62.4%), followed by whole-wheat pasta (18.3%), special (14%) and low-grade durum semolina (5.2%).
The positioning of the different types of pasta shows that the product has left the more strictly naturist consumer niche, mainly oriented to consumption of whole-wheat products, and is reaching other consumer groups who, without making drastic dietary choices, replace the daily dish of pasta with its organic version, with a few forays into specialty fields (special pasta, whole-grain or low-grade durum semolina).
The rate of development of innovative products, revitalising an otherwise mature category, such as special pasta (made with khorasan wheat, spelt or other lesser grains), is approximately twice that recorded for organic semolina pasta.
Companies' expectations for 2012 are marked by cautious optimism, with production expected to increase by about 3%, in line with the average for the last five years. They envisage a decline of 7% in the channel of foreign retail, more than offset by a 5% increase in volumes sold to import and foreign distribution organisations (wholesalers/importers and wholesalers who also retail through businesses owned and/or franchised and/or associated with marketing programs), where 35% of production is expected to be placed. The trend of purchasing groups, "other retail" and catering is expected to remain substantially unchanged.
Great results are not expected from the opening of the U.S. market, following the entry into force on 1 June 2012 of the equivalence between the U.S. and EU regimes of organic farming (Regulation (EU) No 126/2012), substantially due to the presence in the USA of a qualified industrial pasta sector.

References

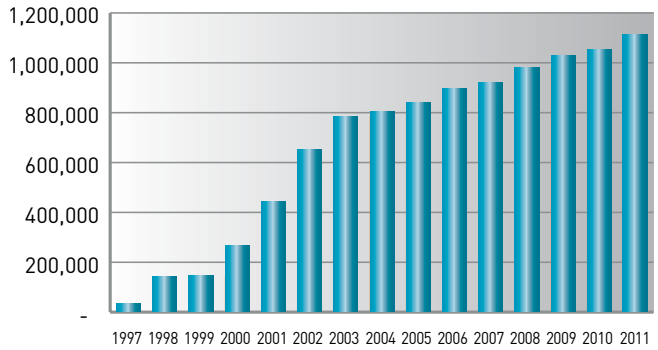
ISMEA (2007): Foreign investment strategies of Italian pasta companies.
Nomisma (2010): *The Italian pasta sector: socio-economic relevance, supply chain reports and international leadership*.
Symphony IRI Group (2010): *The market for pasta in Italy*.

14. The use of organic products in school meals

The widespread use of organic products in school meals

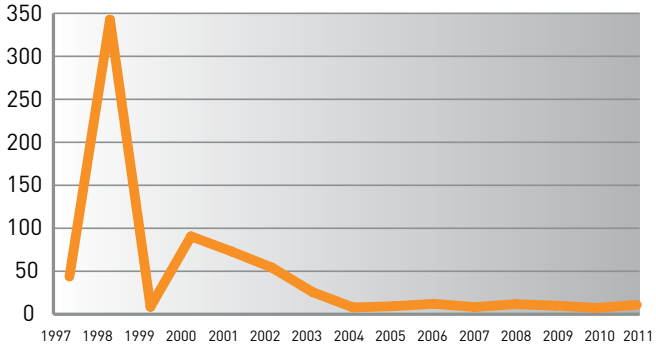
In Italy, organic products were introduced in 1986 for the first time in school canteens in Cesena, which has become a benchmark for national school meals, thanks to the continuous improvements that have been made to the service over the years.
Subsequently, an increasing use of organic produce in school cafeterias has been favoured by some Italian legislation and, in particular, by Law No 488/99 (Finance Act 2000) "Development of organic farming and quality", art. 59, which provided for the use of organic food in public school and hospital canteens. An important support to the use of organic food in canteens is also represented by the current public procurement law, the legislative decree of 12 April 2006, No 163, which introduces the concept of environmental sustainability, and art. 2, which states: "The principle of cost-effectiveness may be subject, to the extent that it is expressly permitted by applicable law and this Code, to criteria specified in the bid announcement, inspired by social needs, as well as the protection of health and the environment and the promotion of sustainable development". National legislation was subsequently instituted by similar provisions at the regional level. The Marches, Friuli Venezia Giulia, Umbria, Veneto, Tuscany, Basilicata, Emilia-Romagna and Lazio, in fact, have enacted their own laws to promote the use of organic products and food in public school canteens.
Although the number of school meals in Italy grew steadily from 1997 to 2010, the growth rates of meals are not constant, showing peaks corresponding to the conversion to organic canteens in some major Italian cities. These peaks occurred in 1998, in Florence, Siena, Pistoia, Padua and Venice, and in the early 2000s, especially in Rome, where the transition to organic in municipal canteens took place in the short span of three years. Here, in fact, from the absence of organic meals in 2000, the number grew to 150,000 meals a day in 2003, for which about 70% of the food is made from certified organic products.
Organic in school catering has also spread in different ways in different Italian regions. It should be noted, first,

Graph. 1 - Daily organic meals served in Italian school canteens (n.)



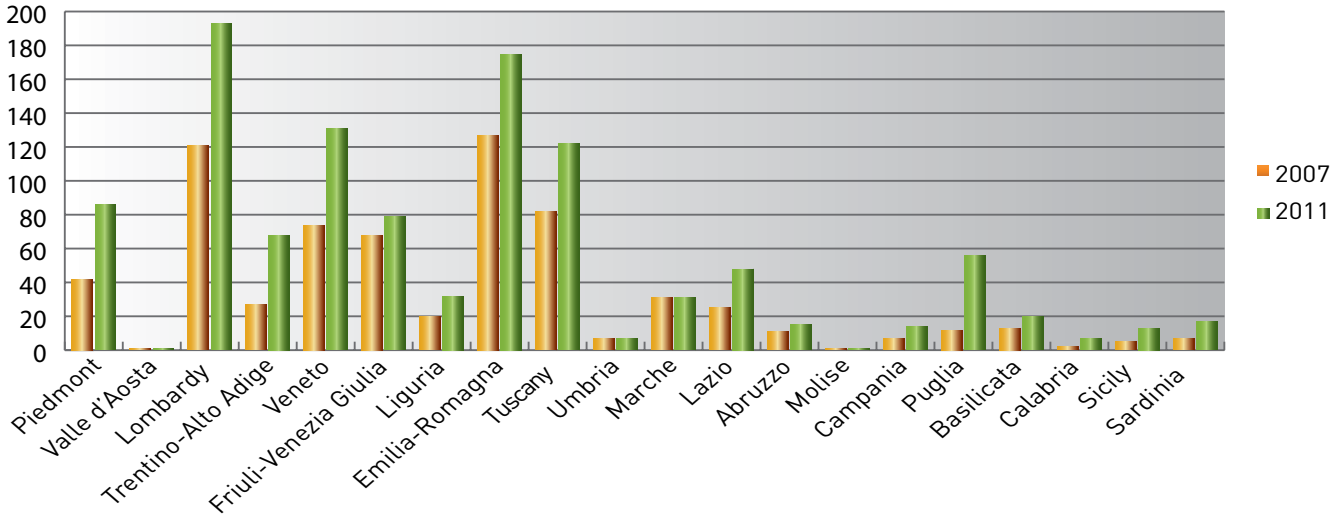
Source: Bio Bank.

Graph. 2 - Change over the previous year in daily organic meals served in school canteens (%)



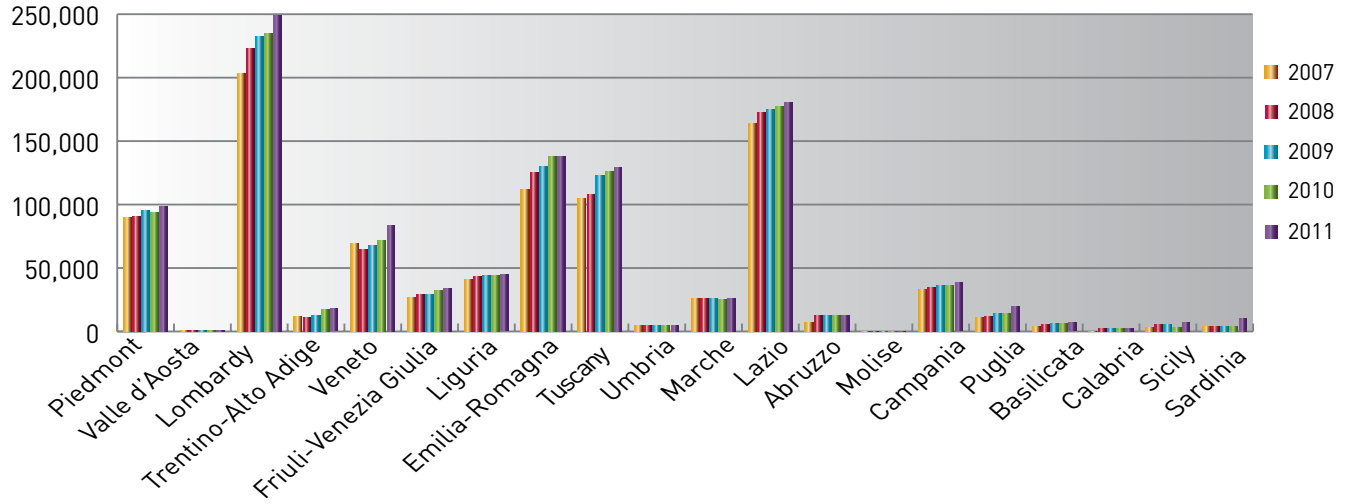
Source: Bio Bank.

Graph. 3 - Organic school canteens by region (n.)



Source: Bio Bank

Graph. 4 - Meals served in organic school canteens by region (n.)



Source: Bio Bank

that there is no direct relationship between the supply of regional organic products and their use in school cafeterias, considering that the top three regions with the largest areas cultivated using organic production methods - in order Sicily, Puglia and Sardinia (SINAB, 2011) - distribute the lowest number of organic meals. An important presence of organic meals, however, is recorded in Lombardy, Friuli Venezia Giulia, Piedmont and Lazio, which are not at the forefront in Italy in terms of UAA devoted to organic production. In view of the significant commitment of some governments in promoting organic in schools, there is not always a corresponding political pressure encouraging the use of local organic products in canteens. This would have boosted supply, by promoting the conversion of conventional farms operating in these regions.

Management of canteen service in some urban settings

Municipalities provide school meals in a very heterogeneous manner. In some cities, school catering is outsourced, that is, entrusted in each step to private contractors through public tender; in other cases it is provided directly by municipalities, while in others management is entrusted to public companies. There are also intermediate forms of public management and outsourcing, in which some services are contracted out, such as, for example, cleaning, cooking or washing dishes. In outsourced management, organic products are provided by the catering company that run the kitchens, while in direct management food comes from agri-food producers; management entrusted to public companies has the same characteristics as outsourcing. An analysis of the specifications and other measures available as of 31/10/2011, which regulate procurement of catering in capital cities, shows a prevailing tendency by government to outsource the service.
Among the regional capitals, the only ones that still retain public staff in canteens, and only buy food by tender, are Venice, Ancona and Trento. In Milan and Bologna, the service is entrusted to public companies, respectively Milano Ristorazione and SERIBO Ltd.; in other cities, however, the management of food service is contracted, including the provision of food and meal preparation, through open-bid procedure with the participation of private entities.
In situations where there is still direct management (Venice, Ancona and Trento), the percentage of organic food in canteens is high. It is likely that, by purchasing products and having the responsibility for their quality, these authorities aim to find foods with the highest characteristics of quality, nutrition and hygiene. Outsourced management, by contrast, does not appear to influence the choice to ensure more or less organic food in school canteens. Among the governments that have adopted this type of service, in fact, there are some cities where the percentage of organic food is high (Florence and Rome), while in others organic product is scarcely present (Genoa, Campobasso, Bari, Potenza, Catanzaro). In Milan and Bologna, however, the percentage of organic food is less than 20%, due mainly to the lack of competition to stimulate outsource service companies to make improvements to the quality of the food used; in addition, a preliminary analysis of available documentation shows the economic aspects in managing the service are considerable, so the use of high-quantity organic products could cause a further increase in costs, probably not considered sustainable by administrations.

School canteens in Rome - The Roma Capitale school catering service is aimed at children and young people in nursery, primary and lower secondary schools. Each school day, 144,000 meals are provided, including a mid-morning snack, for an annual total of 25,920,000 meals. Canteen service is offered in 550 schools, the vast majority equipped with kitchens; in fact, only 17% of dining halls, or 112 consumer terminals, receive meals transported from neighbouring canteens. The service is entirely outsourced, currently performed by 13 different catering companies.
The current contract entered into force in September

Tab. 1 - School catering services: management method and share of organic foods to total

		Management			Share		
Region	City	outsourced	entrusted to public companies	internal with purchase of food	less than 20% organic	20-60% organic	more than 60% organic
Piedmont	Torino	X				X	
Valle d'Aosta	Aosta	X				X	
Lombardy	Milan		X		X		
Trentino-Alto Adige	Trento			X			X
Veneto	Venice			X			X
Friuli-Venezia Giulia	Trieste	X				X	
Liguria	Genoa	X			X		
Emilia-Romagna	Bologna		X		X		
Tuscany	Florence	X					X
Umbria	Perugia	X				X	
Marche	Ancona			X			X
Lazio	Rome	X					X
Abruzzo	Aquila	X				X	
Molise	Campobasso	X			X		
Campania	Naples	X				X	
Puglia	Bari	X			X		
Basilicata	Potenza	X			X		
Calabria	Catanzaro	X			X		
Sicily	Palermo	X			X		
Sardinia	Cagliari	X				X	

Source: Albert processing (Association of catering services; www.alberts.it) on school catering tenders.

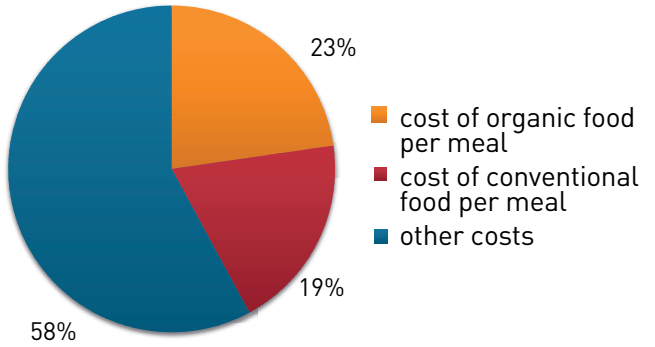
2007 and ended in June 2012. The average cost for each meal was 5.03 euro.

The annual turnover generated by Roman canteens amounted to 130,733,600 euro. This amount is inclusive of all expense items incurred by companies for the provision of the service. Spending on all food, organic and conventional, including transport, accounts for 42% of the cost of a single meal, for a value of 2.12 euro per meal, of which 1.14 euro is for the purchase of organic products.

The annual turnover generated from the purchase of organic products amounted to 29,603,768 euro and makes Roma Capitale one of the most important national organic buyers. Foods are purchased for an amount of 54,850,056 euro annually.

Organic foods account for 54% of the value of the food used in Roman canteens. The average cost of a kilogram of organic products to Rome's canteens, in fact, amounts to 2.41 euro, while that of a kilogram of conventional food is higher (5.52 euro/kg), since this category

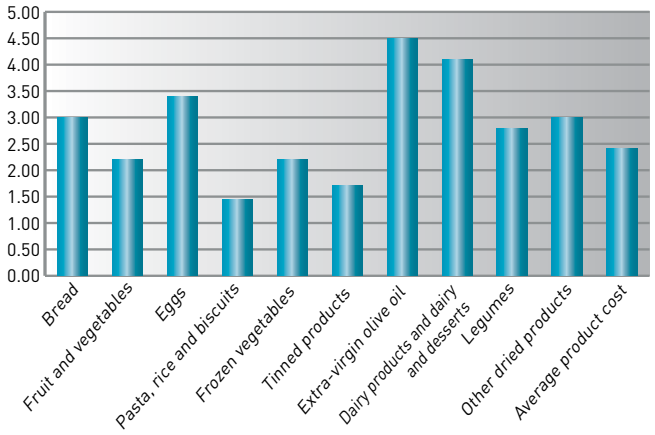
Graph. 5 - Share of food to cost of meals in Rome's school canteens, 2007-2012



Source: Albert processing on school catering tenders.

includes high-cost types of food, such as meat and fish. Organic items are fruits, fresh and frozen vegetables, eggs, bread, pasta, biscuits, canned products (canned tomatoes and paste), extra-virgin olive oil, legumes, some cheeses and dairy products and other products such as dried herbs, white wine and vinegar.
The Roman school catering chain is divided into several stages; producers and processing industries, in fact, can-

Graph. 6 - Average cost of organic products used in Rome's school canteens (euro/kg), 2007-2012



Source: Albert processing on school catering tenders.

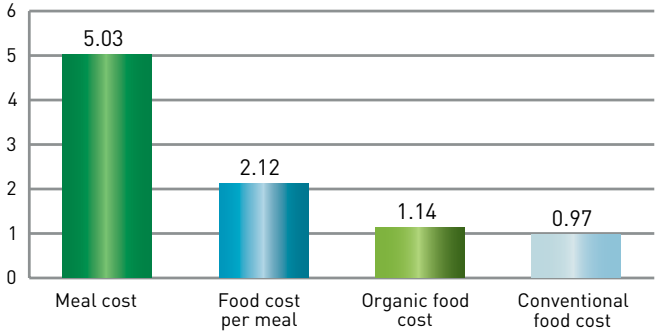
Tab. 2 - Foods used in Rome's school canteens and their cost, 2007-2012

	Kg/year	euro	euro/kg
Organic foods			
Bread	1,555,200	4,665,600	3.00
Fruit and vegetables	5,400,000	11,880,000	2.20
Eggs	122,000	414,800	3.40
Pasta and biscuits	2,203,200	3,194,300	1.45
Frozen vegetables	311,040	684,288	2.20
Tinned foods	907,200	1,551,312	1.71
Extra-virgin olive oil	778,000	3,501,000	4.50
Dairy products and desserts	673,920	2,762,500	4.10
Legumes	207,360	580,608	2.80
Other dried products	123,120	369,360	3.00
Total		**29,603,768**	
Non-organic foods			
Beef	907,200	9,072,000	10.00
Pigmeat	400,000	1,520,000	3.80
Sheepmeat	80,000	864,000	10.80
Poultrymeat	488,000	1,659,200	3.40
Sausages	648,000	3,110,000	4.80
Parboiled rice	388,800	563,700	1.45
Frozen fish	1,250,640	6,868,800	5.49
Preserved fish	45,360	81,648	1.80
Cheese	362,880	1,487,500	4.10
Salt and spices	6,480	19,440	3.00
Total		**25,246,288**	
GENERAL TOTAL	**-**	**54,850,056**	

Source: Albert processing on school catering tenders.

not reach the many schools directly. The city's transport is often problematic and the distribution must take place simultaneously in several places. Delivery is carried out in schools, then, by companies with proper platforms to

Graph. 7 - Cost of daily meals and food by type of product (euro), 2007-2012



Source: Albert processing on school catering tenders.

store many types of products, assemble them and deliver them to schools. A shortening of the chain would be possible only by deconstructing the current system, eliminating school kitchens and concentrating production in a dozen large cooking centres, which would channel cooked meals to different canteens. In this case the producer would serve centres directly. This solution has been adopted in other major cities such as Naples and Bologna. It is believed, however, that the Roman model, which includes the kitchen within the school, ensures high-quality meals.

Outlook

In the 1996-2010 period there was a general increase in the consumption of organic products, matched by an increase in the use of organic food in school meals. However, there are critical elements that foretell a slowdown of this phenomenon for the years to come. In particular, the need to reduce service costs and rationalise items of government expenditure is forcing some areas to reduce the amount of organic used in canteens and encourage greater use of local produce. It is believed, however, that the use of organic products in school meals still represents, in the coming years, a significant share. It would be important, at this time, to propose a model of common specifications which involves the use of organic products, protects farmers and, at the same time, leads to a sustainable price of meals.

Model bid specifications for sustainable school food

The use of organic products is only one of the elements that the government may introduce in the contract to ensure sustainable food. In order to ensure effective, safe and certified use of organic, a sustainable[1] model needs to be established for tender documents applicable throughout the national territory, taking into account the different aspects related to service management, food supply and reduction of pollutants.

As for school catering, there are national guidelines issued by the Ministry of Health and others produced by the Ministry of Environment. Many regions have also issued their own guidelines to regulate the sector. All these measures, while analysing and defining important aspects of catering service, do not, however, take due account of procedural and management aspects, in particular those under the d.pr No 207/2010.

The model tender includes a contracted service with an "open procedure" awarded to the most economically advantageous tender; it is not advisable to choose on the basis of the lowest price, which pushes the participating companies to rationalise cost excessively at the expense of quality and food safety.

The most economically advantageous offer will be rewarded with a score for both the economic value of the offer, and a series of technical improvements indicated by the rival firm to proposals of the contracting entity. The d.pr 207/2010 provides, however, that the score for financial offer is no longer allocated according to the different prices offered by competitors, but is calculated based on the downward price percentage quoted by each competitor on the basic bidding price. This new element has changed, in substance, the procurement process, giving more weight to the economic item than the technical.

The starting bid price must, therefore, be reasonable. Too low a price would encourage abnormally low tenders, which would mean management of the service would suffer. The model tender contract shall contain elements of economic management that allow governments to know the various costs of the service and the estimated economic value of the proposed technical improvements.

For the preparation of meals organic products are to be used, in season. Certain types of foods are introduced as mandatory (always vegetables and fruits), while others may be offered as improvements by a competitor. It is essential, in the tender documents, to bind the trustee to a fair and transparent relationship with organic suppliers and farmers. The administration, in preparation of the tender, will have to make a market survey and engage with various stakeholders to ensure that there is no difficulty in obtaining the products. The investigation will involve producers' associations in order to promote virtuous circles of production and consumption at the local level. A maximum distance of supply may be established for certain types of food, to reduce emissions of pollutants arising from transport, to ensure the freshness of the products and encourage the use of local produce. The sustainable catering tender may also provide elements of social impact, favouring and encouraging the use of products derived from social agriculture and fair trade and solidarity. Other measures included in the contract may include: the elimination of plastic in school canteens through the use of reusable washable dishes or, alternatively, disposable, biodegradable, recyclable and compostable plates, cutlery and glasses; the reduction of energy consumption through the use of low-power equipment or the use of solar panels for the production of clean energy in schools and the reduction of noise by soundproofing; the implementation of separate collection of waste.

[1] *The tender model has been defined bearing in mind analysis of existing tenders and guidelines worked out by a team coordinated by Paolo Agostini and promoted by AIAB, with participation from some catering enterprises and Dr. Giuseppe Morino of the Bambin Gesu Pediatric Hospital in Rome.*

15. Organic wine

Organic wine worldwide

Viticulture is one of the plantings that most distinguishes the tradition, culture and landscape of different areas, not only in the Mediterranean but also in Central and Eastern Europe and the Near East. In recent years, viticulture has grown and has also affected large areas in other continents, where, however, it is primarily a specialised, intensive and high-tech crop, not bound by traditions and social interconnections. As a specialised and intensive cultivation, viticulture in the last two decades has conquered large areas in North and South America, Australia and New Zealand, South Africa and, more recently, in Asia (within a few years China has reached 500,000 hectares of vineyards) and in Eastern Europe, where in reality it is a reintroduction and not a new culture (in Moldova, Armenia, etc.). For centuries, the vine has evolved and has travelled with man, adapting and changing according to the climate, soils and farming practices to which it has been subjected. This has resulted in a rich diversity of varieties and flavours that have created many truly typical productions in various European wine producing areas. This has helped to create one of the most economically important and lively agricultural sectors, not only in the European Union but also in the new wine-growing countries, which now also enjoy a considerable reputation.

The transition to organic viticulture on the one hand can be considered the natural evolution of the management of a crop so tied to the land; on the other hand, it has caused considerable conflicts among growers (organic and conventional), and especially between the conventional wine industry and organic producers. While all crops and their processed forms could be regularly certified as organic as of 1991 (including wine from fruit other than grapes), organic wine had to wait until 2012 to be fully recognised.

Despite the above-mentioned regulatory difficulties, organic viticulture has spread gradually in Europe, although in different ways, with a certain intensity especially in the last 4-5 years. Some of the emerging viticulture countries have contributed to its success. Worldwide, surface planted to organic vineyards reached 217,634 hectares in 2010, or 2.9% of the total area planted (OIV), with 88% cultivated in Europe.

The data of vine-growing area in different continents show Europe in the lead, but also the upward trend registered in the countries of North and South America.

Tab. 1 - Surface planted to organic vineyards on the five continents (ha)

	2004	2005	2006	2007	2008	2009	2010
Africa	82	82	82	282	478	1,651	1,719
Asia	2,751	2,193	2,480	3,522	2,414	2,424	2,897
Europe	74,099	87,398	95,011	101,037	127,613	167,146	192,671
Latin America	2,165	1,892	6,482	6,927	7,063	6,525	7,948
North America	8,182	9,296	9,264	9,924	11,560	11,577	11,577
Oceania	299	299	540	540	1,336	822	822
Total	**87,577**	**101,159**	**113,859**	**122,233**	**150,463**	**190,144**	**217,634**

Source: Willer, Helga and Kilcher, Lukas (Eds.) (2012) The World of Organic Agriculture - Statistics and Emerging Trends 2012. Research Institute of Organic Agriculture (FiBL), Frick, and International Federation of Organic Agriculture Movements (IFOAM), Bonn.

The data are particularly significant when analysed in the light of estimates on the global wine sector, carried out by the OIV[1], which show a stagnation in total areas planted with vines, with considerable decreases in Europe, offset by increases in new viticultural areas (including China and Russia). This means that, in a context in which viticulture is suffering, organic is becoming a valuable tool for enhancement of production and greater territorial and traditional connotations, counteracting the loss of areas planted with vines in the most suitable and most traditional territories (like Europe).

Detailed analysis of individual countries outside Europe clearly shows that production in Oceania is essentially linked to New Zealand, although Australia shows great interest from the point of view of consumption, as it does not yet have consistent and sufficient production of its own[2]. In Australia, in fact, the demand for organic products, including wine, is constantly growing and does not find an adequate supply, in quantitative terms, in local production. As a result Australia is in the paradoxical situation of importing significant amounts of organic wine mainly from Europe, despite the high potential of its wine growers, who operate in climatic conditions that would allow relatively simple organic management. Argentina and Chile have the most important share of organic vineyards in Latin America, and the United States has almost all of those in North America.

Tab. 2 - Surface planted to organic vineyards in the most representative countries (ha)

	2004	2005	2006	2007	2008	2009	2010
Argentina	273		3,945	3,913	3,940	3,513	4,048
Australia					796	282	282
Canada	99	69	69	69	112	129	129
Chile	1,892	1,892	2,477	2,974	3,083	2,972	3,859
China	2,000	2,000	2,000	2,000	2,000	2,000	2,000
New Zealand	299	299	540	540	540	540	540
South Africa	82	82	82	262	458	1,651	1,719
United States of America	8,083	9,227	9,195	9,855	11,448	11,448	11,448

Source: Willer, Helga and Kilcher, Lukas (Eds.) (2012) The World of Organic Agriculture - Statistics and Emerging Trends 2012. Research Institute of Organic Agriculture (FiBL), Frick, and International Federation of Organic Agriculture Movements (IFOAM), Bonn.

Organic wine in Europe

In the European Union the most important countries in organic wine production are Italy, France and Spain, where surface has evolved steadily since 2000. This development is only partly related to agri-environment payments (RDP); in fact, there are no drastic reductions linked to the end of the programming period in progress. This suggests that the choice of organic farming by wine producers was motivated by technical reasons, and environmental and market awareness, despite the unclear legal situation of the last few years. Specifically, the main reasons for conversion by producers were, in fact, the desire to protect the environment and their own health and the interest in using that attitude as commercial leverage, and then making it a useful element for promoting their farm and the wines they produce.

Comparing organic surfaces to the total of convention-

[1] *OIV, 2012. Notes on world trends.*

[2] *Information drawn from a conversation with Tim Marshall, founder of Tmorganics (http://www.tmorganics.com/).*

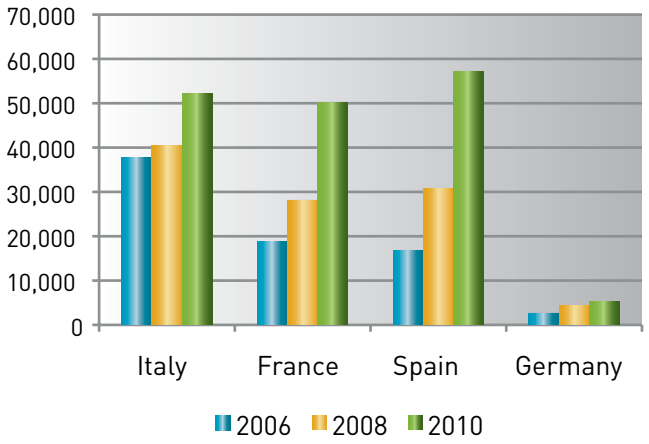
al viticulture suggests two considerations: a) even in countries where viticulture has a limited extent (such as Austria and Germany), the organic system represents a significant percentage of the wine system, the choice being motivated mostly by technical reasons (hybrids and varieties resistant to major diseases) and environmental

Tab. 3 - Share of organic viticulture surface in major European countries (ha), 2010

	organic vineyard surface	total vineyard surface	% organic
Italy	52,273	632,000	8.3
France	50,268	819,000	6.1
Spain	57,231	1,082,000	5.3
Germany	5,200	102,000	5.1
Austria	3,863	46,000	8.4
United States of America	8,083	9,227	9,195

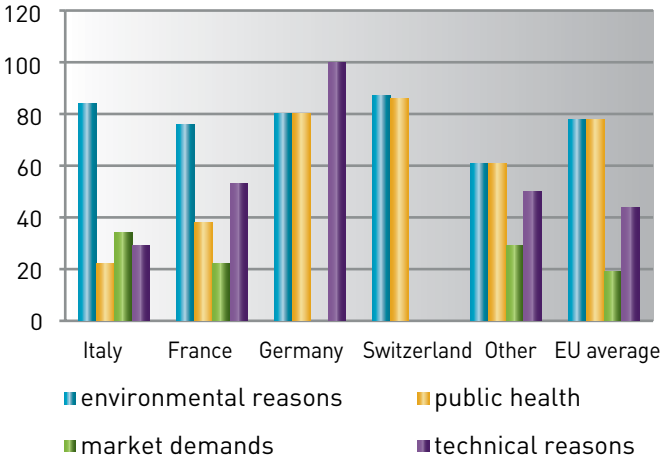
Source: Willer et al. on OIV figures.

Graph. 1 - Organic viticulture surface in major EU producer countries (ha)



Source: Willer et al.

Graph. 2 - Winegrowers' reasons for choosing organic methods



Source: Micheloni C. et al, 2007. Status quo analysis of wine producers practices, market needs and consumers perception. www.orwine.org.

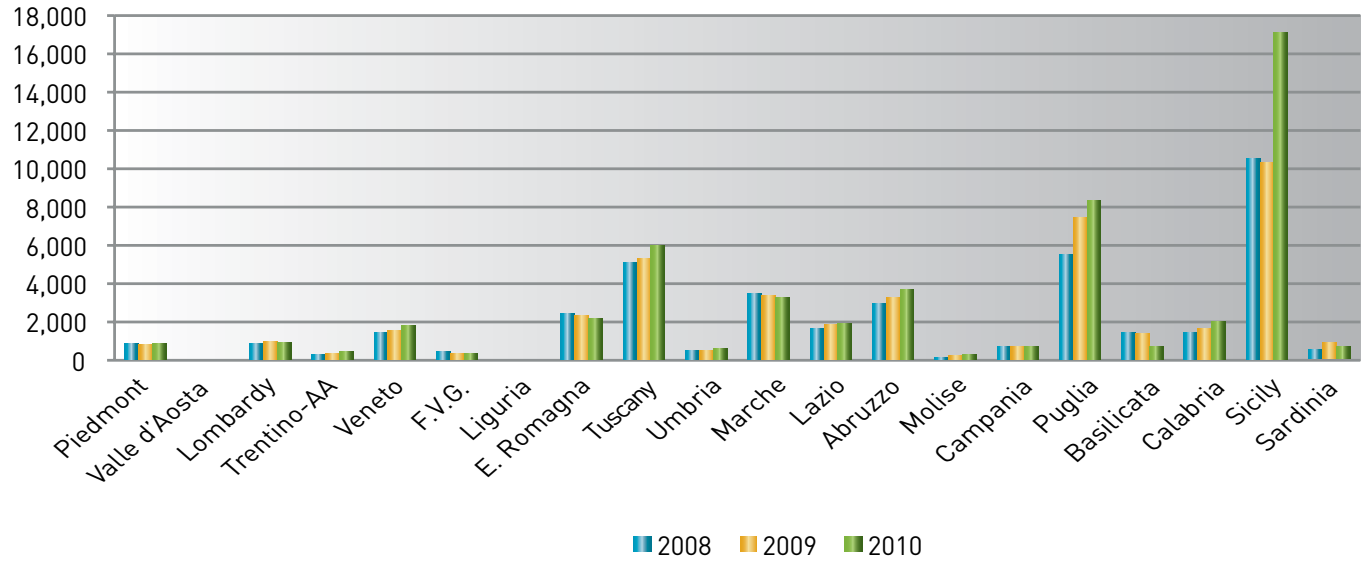
rather than commercial factors. In traditional exporting countries (including Italy), however, commercial reasons assume more weight; b) in all the major countries, organic viticulture has become interesting, taking the sector out of the "niche" context.

Organic wine in Italy

Looking at the size of organic vineyards in various Italian regions, both in development over the years and the current situation, the growth trend continues, albeit in very different ways: organic vineyards in Tuscany, Puglia, the Marches and Sicily have always been large, while other regions of the same wine-making tradition (such as Piedmont and Trentino-Alto Adige), seem to show less interest in organic. These differences are not explained either by different types of wine or areas with a designation, as organic is equally present among DOC, PGI and former table wines.

In particular, the data on the share planted to organic viticulture do not provide an explanation for the differ-

Graph. 3 - Organic vineyards in Italian regions (ha)



Source: SINAB.

ences between regions, if not attributable to a specific sensitivity of winegrowers and/or perhaps to the activation of groups of winegrowers (for example, the group of wine growers in the heart of the Chianti Classico, in an aggregated effort, have led to the conversion of approximately 80% of the territory of Panzano), as well as commercial initiatives. It highlights the importance of organic viticulture especially in Calabria, the Marches, Lazio, Abruzzo, Basilicata, Sicily and Tuscany, where more than 10% of the region's vineyards are organic. The involvement of the various business types and wine produced varies considerably within individual regions, so a predominant type or, therefore, the main reason that led to the adoption of organic production, cannot be identified.

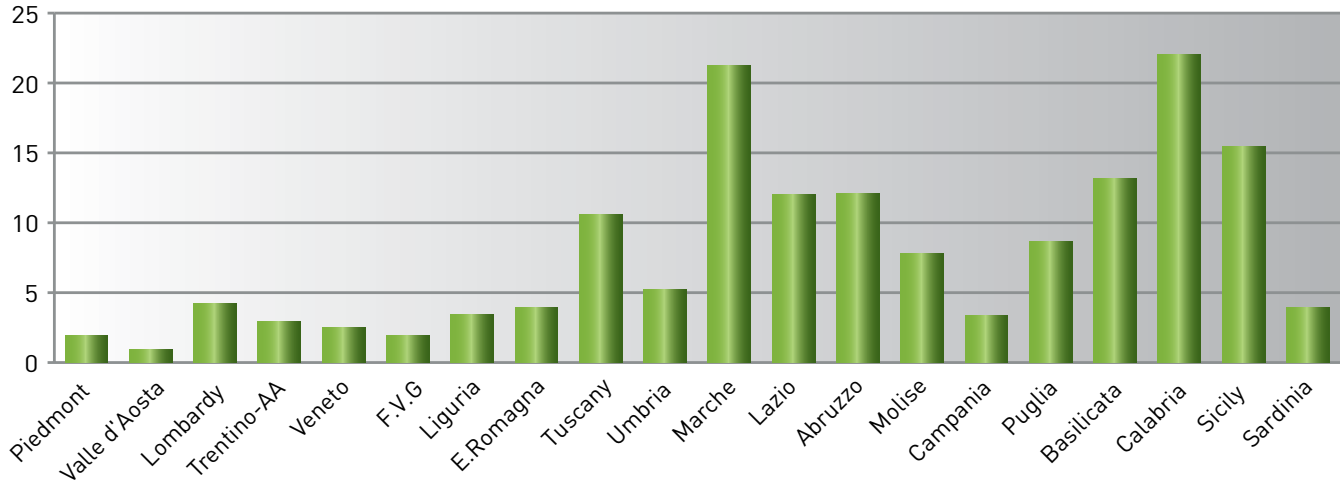
There are no official statistics on the volume of organic wine produced or marketed, nor on the number of cellars where organic grapes are transformed into wine. With regard to the sheer number of wineries, however, SINAB has developed a fairly reliable estimate. The trend analysis from 2003 to 2010 highlights the decline of 2010, probably related to the arrest of the regulatory process, which has only recently been resolved.

Tab. 4 - Wineries certified for the processing of organic grapes in Italy (n.)

	Certified wineries
2003	270
2004	392
2005	367
2006	535
2007	459
2008	588
2009	764
2010	628

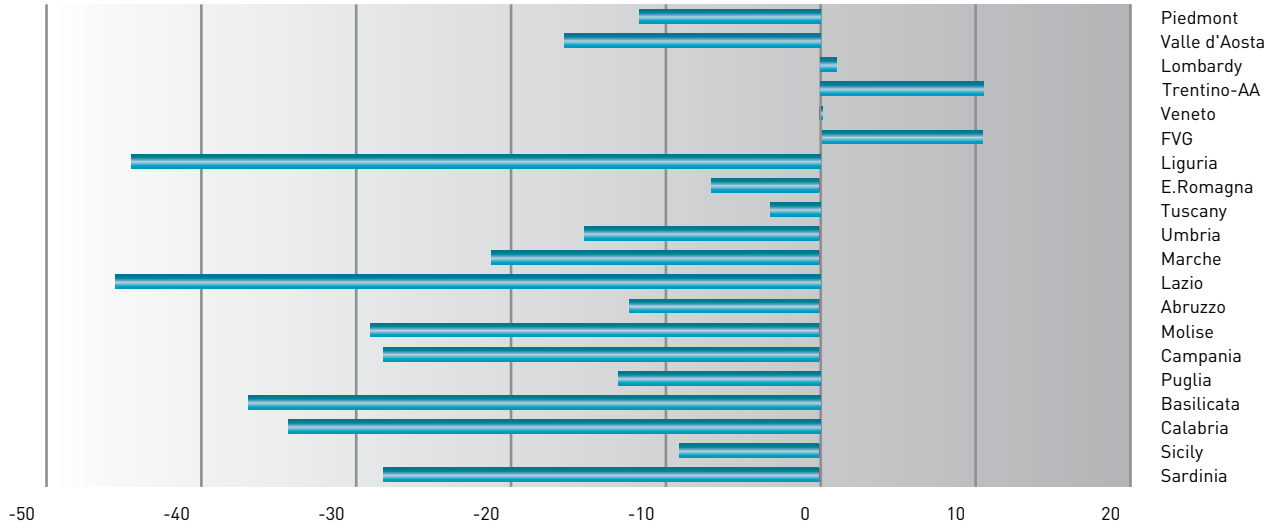
Source: SINAB.

Graph. 4 - Share of UAA organic vineyards to conventional, by region (%), 2010



Source: SINAB and ISTAT, Agriculture Census

Graph. 5 - Percentage change of vineyard surface in Italian regions, 2000 - 2010



Source: ISTAT.

A regulation 21 years in the making

Wine is the last "organic" agri-food product to be regulated at Community level with regard to transformation, despite being one of the leading sectors of European agri-food production and exports. The history of the process, which led to the enactment of a regulation only in 2012, began in 1991, when the first regulation on organic farming defined the production of grapes (like all other crops), but specifically excluded wine from processing standards. This exclusion, as is known, forced operators to apply wine labels bearing the words "wine from organic grapes."

In the following years, not only did European wine producers continue to ask for the definition of a rule that would allow a clearer communication about organic wine, but several non-European countries, importers of our wines, made requests to the European Commission to this effect.
In this context, and after several failed attempts to reach an agreement on a possible regulatory text, the Commission decided to fund a research project as the scientific basis for specific regulation on organic wine-making. The project ORWINE (www.orwine.org), which ran from 2006 to 2009, made it possible to produce the first draft regulations, issued in spring 2010. However, already by June of the same year there was strong opposition by five Member States, which threatened a minority block.
After complex negotiations, and through mediation proposals on the dispute over limits on the use of sulphites, but mainly through decisive action by the organic sector, which cooperated on the European Charter on organic winemaking (www.organic-wine-carta.eu), negotiations were resumed in April 2011, and, finally, in February 2012, Regulation (EC) No 203/2012 was issued. The European Charter on organic winemaking unified private standards in Spain, Italy, France and Switzerland in what later became the text of the European regulation, negotiating limits on sulphites with Austria and Germany. The initiative showed that the rule could be implemented and pointed the way to possible conciliation.
The current text of the Regulation is less ambitious than expected from a part of the production world, but is certainly an important starting point, allowing, after 21 years, labels bearing the words "organic wine" and

The contents of Regulation (EU) No 203/2012

Obvious, but useful to remember, organic wine is made only with organic grapes (which also applies to biodynamic wine, which shares the same requirements of Community legislation).

In cellars some practices are prohibited, such as partial concentration through cooling, desulphurisation of musts, electrodialyses, partial dealcoholisation, the treatment of wine with cation exchangers.

Other practices are limited: heat treatment may not exceed 70°C and filtration cannot be conducted with pores of less than 0.2 microns in diameter (that means yes to microfiltration, but no to ultra- and nano-filtration).

As for ingredients and processing aids, almost all those of natural origin are allowed (plant, animal and microbial, including yeasts and bacteria), with the recommendation to prefer organic origin, when available, and synthetic ones are limited. It is worthwhile to specify that for wine yeasts it is mandatory to use organic only if they are of the type/strain suitable to winemaking. In other cases, conventional yeasts may be used, as long as they are not GMOs, or, of course, of spontaneous fermentation or with their own yeasts (also purified and freeze-dried).

DMDC, PVPP, sulphites and ammonium bisulphite, urease, mannoproteins, carboxymethylcellulose, sorbates and a few others cannot be used. Lysozyme and the betaglucasi, though they are of natural origin, cannot be used.

therefore, the use of the European logo.
On the whole, an organic producer may use 44 additives, processing aids, etc., while conventional producers have almost 70 available.

For sulphur dioxide, limits have been imposed that are certainly not difficult for our producers but critical for some producers in Northern Europe and, above all, for bottlers.

Tab. 5 - Additives and processing aids that can be used in organic wine-making according to Reg. (EU) No 203/2012

Substance	Restriction
Air and gaseous oxygen	
Perlite, cellulose and diatomaceous earth	Only as inert filtering agents
Nitrogen, argon and carbon dioxide	
Yeasts	From organic production, if available (see text)
Diammonium phosphate and thiamine hydrochloride	For growing yeast
Carbon for oenological use	
Edible gelatine, plant proteins from wheat or peas, isinglass	From organic production, if available
Albumin from egg white and tannins	From organic production, if available
Casein, potassium caseinate, silicon dioxide, bentonite, pectolytic enzymes	
Lactic acid and L-tartaric acid	
Calcium carbonate, neutral potassium tartrate, potassium bicarbonate	
Aleppo pine resin	For retzina (Greek wine)
Lactic bacteria	
L-ascorbic acid	
Citric acid	
Meta-tartaric acid	
Acacia gum (gum arabic)	From organic production, if available
Potassium bitartrate	
Cupric citrate	
Copper sulphate	Only until July 31, 2015
Oak chips	
Potassium alginate	
Potassium sulphate	Only for the production of "generous wines" and Spanish "generous wine liqueur"

Source: Regulation (EU) No 203/2012.

Tab. 6 - Maximum total sulphur dioxide content defined by Reg. (EU) No 203/2012

Type of wine (defined by EC Reg. 606/09)	Limits in conventional	Limits in organic	
Red wines with sugar	150 mg/l	*residual sugar <2g/l*	*100mg/l*
residual <5g/l		*residual sugar> 2 g/l*	*120mg/l*
Red wines with residual sugar> 5g/l	200 mg/l		*170mg/l*
White and rosé wines with residual sugar <5g/l	200 mg/l	*residual sugar <2g/l*	*150mg/l*
		residual sugar >2g/l	*170mg/l*
White and rosé wines with residual sugar > 5g/l	250 mg/l		*220mg/l*
Special wines			
- as in paragraph 2 c	300 mg/l		*270 mg/l*
- as in paragraph 2 d	350 mg/l		*320 mg/l*
- as in paragraph 2 e	400 mg/l		*3700 mg/l*
Fortified wines with residual sugar < 5g/l	150 mg/l		*120mg/l*
Fortified wines with residual sugar ≥ 5g/l	200 mg/l		*170mg/l*
Sparkling wines			
quality sparkling wines	185 mg/l		*155 mg/l*
other sparkling wines	235 mg/l		*205 mg/l*

Source: Regulation (EU) No 203/2012.

The relationship with consumers and prospects for growth

The ORWINE project was also an opportunity to make interesting qualitative studies on consumer choice. The results highlight that, in addition to a great interest in organic wine, there is still prejudice and misinformation, especially concerning the sensory characteristics related to these products. Unreasonably, in fact, many consumers still have the idea that organic wine is good for the environment but not for those who drink it. This prejudice has its roots in early attempts, made about thirty years ago, to produce organic wine, often by operators who were not specialised wine growers, who obtained poor organoleptic results. In more recent times, organic wines have frequently won major awards in conventional wine competitions, giving clear evidence of the high quality that can be achieved with organic techniques.

In recent years, moreover, consumers are increasingly attentive to all natural, authentic wines, and the attention of the media has grown as well. The situation could be absolutely conducive to the further development of the sector, but there is still a great degree of confusion between statements and the actual content they convey. On these aspects, perhaps, the implementation of the recent EU regulation will help to provide useful clarifications.
Overall, then, all the information collected induces optimism: constantly expanding surface, consumer interest, the definitive legal situation and, fundamental to wine, fully respectable sensory quality of product.
Finally, a further positive signal on the potential of the market comes from success at trade fairs - such as Millesimebio, which is held annually in Montpellier - and at general exhibitions dedicated to the wine industry, where more and more often one finds "organic" labels even on wines produced by well-known, successful wineries.

Tab. 7 - Image of organic wine among Italian, French, German and Swiss consumers[1]

	ITALY		FRANCE		GERMANY		SWITZERLAND	
	Org	Wine	Org	Wine	Org	Wine	Org	Wine
Product with no pesticides	☺	☺	/	/	☺	☺	☺	☺
Purity	😐	😐	😐	😐	😐	😐	☺	☺
Availability	☹	/	☹	😐	☹	☹	☹	☹
Taste	/	☹	☹	☹	☹	☹	☹	☹
Healthiness	☺	☺	/		/	☺	☺	☺
Quality/price ratio	☹	☹	😐	☹	☹	☹	☺	☺
Credibility	☹	☹	☺	☺	☹	☹	☹	/

[1] *Habitual consumers of organic wine (Org); self-described wine expert consumers (Wine).*
Legend:

☺ = *mainly positive perception*

😐 = *neither negative nor positive perception*

☹ = *mainly negative perception*

/ = *not available*

Source: ORWINE project.

16. Bio-organic cosmetics and detergent

Organic and natural cosmetics

Organic and natural cosmetics still suffer from the lack of specific regulation, leading to the proliferation and coexistence of numerous disciplines and national brands, which operate largely at the level of individual countries. Examples are the Soil Association brand, adopted mainly by British companies, Bdih, mainly in Germany, or Cosmebio in France. The French Ecocert standard has long operated beyond national borders and is well established in other countries, while in North America, the most common standard is NPA, which coexists with the NSF/ANSI standard, and USDA Nop, create for agribusiness.
By examining numerous existing meanings, we can attempt a possible synthesis to distinguish the two types of product. In particular:

- cosmetics are natural when they contain ingredients of plant and/or animal origin that are not harmful to human health, based on current knowledge, according to a positive and/or negative list indicated in the chosen specification, with certification by an accredited inspection body;
- cosmetics are organic if they contain a variable percentage, declared on the label, of ingredients of certified organic plant and/or animal origin according to Reg. (EC) No 834/2007, according to a positive and/or negative list and according to the minimum quantities indicated in the specification chosen, with certification by an accredited inspection body.

The need for regulation of the sector was felt most in recent years, with the rise in demand for these products. The sensitivity of consumers to the possible health risks arising from the use of conventional cosmetic products is rising[1], but it is certainly not easy to disentangle the fragmented landscape of certifications, brands and symbols, and recognise the ambiguity of many labels and advertisements.
The Natural Cosmetics Brand Assessment survey, published in August 2011 by the British research company Organic Monitor, and the Sustainable Cosmetics Summit, organised in Paris by the same company in November 2011, have highlighted not only the different characteristics of the products on the market but also misleading communication used by companies, all of which can increase the degree of market uncertainty and loss of consumer confidence.
With regard to production processes of organic and natural cosmetics, Organic Monitor detects a tendency to increase sustainability, aiming at the gradual replacement of synthetic ingredients with local organic ingredients, and fair trade, contributing to the promotion of biodiversity, using eco-friendly packaging and renewable energy. The need for clear rules on the sector becomes increasingly stringent and, in the process of transition to a Community regulation, the adoption of private and voluntary certification issued by an accredited institution remains the most appropriate strategy for companies that want, on the one hand, to qualify their production, and, on the other, to be clear to consumers.
In this view, information and market data on the sector are inadequate, fragmented and mostly still "aggregates". Being a niche in the vast market of cosmetics, the few existing sources combine organic and natural as a single item.

The global and European market - according to data released by Organic Monitor, the worldwide turnover of organic and natural cosmetics in 2010 was 6.6 billion euro,

[1] *In particular, in conventional cosmetics, the substances considered most risky are preservatives (like parabens, Kathon, triclosan); foaming surfactants (SLS, SLES); silicon, petroleum derivatives, dyes, perfumes and other ingredients (DEA, MEA, TEA, PEG, PPG). Added to these are potential pesticide residues and GMO ingredients.*

with a growth rate of 7% compared to 2009. The largest market is North America, with a turnover of 4 billion euro and an annual per capita expenditure of around 12 euro, three times that of Europe, at 4 euro. Sales in Europe are estimated at 2.1 billion euro, 2% of the market. Germany is the leading country in Europe, with a turnover of 865 million euro, equivalent to 6.7% of the national market for cosmetics and a per capita expenditure of 10.5 euro per year, which is closer to the American than the European average. Italy and France are next, with a market share of around 3%, followed by the United Kingdom (2.4%).
For 2012, given the difficult economic situation in Europe, Organic Monitor forecasts a slowdown in the growth rate, due to a greater consumer focus on price and a parallel decrease in investment by companies.
But the future is still full of opportunities, mainly due to the increase in sales in non-specialised channels. Among the predictions are the following: the increased number of theme or brand-based concept stores, which focus on setting, atmosphere and sensory experience; greater awareness of private brands in large-scale retail; stronger visibility of brands and distinctive logos; boosting market and product segmentation.

The Italian market - In Italy, sales of organic and natural cosmetics are estimated by Organic Monitor at 247 million euro, with a per capita expenditure of 4.2 euro, in line with the European average.
According to the Bio Bank census, as of June 30, 2012, 229 Italian organic and natural cosmetics companies have chosen the path of certification for some products, many products or their entire range.
The category has developed especially in the North, with 69% of companies, basically concentrated in four regions: Lombardy, Emilia-Romagna, Tuscany and Veneto. This is a very diverse universe, in which various business types coexist: "historical" companies and very recent companies; agri-food companies that diversify into organic and natural cosmetics, using leftovers as raw materials; companies specialising in the production of raw materials, semi-finished products and others that only make finished products; companies that produce only for third parties, others that produce only their own brands, others that operate in both ways.
There are over 4,000 certified products with a very wide

Tab. 1 - Natural and organic cosmetics companies in Italy as of 30-06-2012

Region	(No)	% of total Italy
Piedmont	11	4.8
Valle d'Aosta	0	0.0
Liguria	11	4.8
Lombardy	63	27.5
Trentino-Alto Adige	6	2.6
Veneto	22	9.6
Friuli Venezia Giulia	3	1.3
Emilia-Romagna	42	18.3
Total North	**158**	**69.0**
Tuscany	25	10.9
Marche	12	5.2
Umbria	11	4.8
Lazio	10	4.4
Tot Centre	**58**	**25.3**
Abruzzo	1	0.4
Molise	0	0.0
Campania	4	1.7
Puglia	3	1.3
Basilicata	0	0.0
Calabria	1	0.4
Tot South	**9**	**3.9**
Sicily	3	1.3
Sardinia	1	0.4
Tot Islands	**4**	**1.7**
Total General	**229**	**100.0**

Source: Bio Bank.

range to meet all needs; there is an emergence of products for vegans (no animal ingredients), for infants and children; several lines dedicated to cosmetics for men and plenty of products for pets. Growing attention is given to packaging in bottles and containers made from recycled, recyclable or refillable materials, thanks to the diffusion of the sales on tap, a non-secondary aspect that changes the content-container relationship, as well as lowering prices.
The distribution channels are manifold: these products can be found in health food stores, in herbalists, pharmacies and drugstores, supermarkets and specialty stores for personal and home hygiene. There is also an offer on the internet, with e-commerce sites promoted by shops, retailers and manufacturers, collective purchase through purchasing groups, and in various cities, organic perfumeries have sprung up.

European standards

European legislation on organic farming does not provide specific rules for cosmetics. Even when the raw materials are generally agricultural, and therefore subject to this law, cosmetics derived from the various processes of transformation are not attributable to primary production.
In fact, the only European certification system currently in force is related to the Ecolabel, which focuses on the environmental impact of products throughout the supply chain, without any reference to organic. Established in 1992, currently governed by Regulation (EC) No 66/2010, it covers 24 categories of products and two services. These include household detergents, with multi-purpose cleaners, dishwashing, laundry and dishwasher detergents, which are mainly sold in large-scale retail, and cosmetics, which now include only products for rinsing (soaps, shampoos and balsamic hair products).
Pending official regulation, a goal that seems unattainable in the short term, the first shared rules in Europe come from two "cartels" that work with private and voluntary standards: Cosmos and Natrue.

The Cosmos standard - Cosmetics Organic Standard was promoted in 2003 by leading certification bodies and associations of organic producers in Europe: Bdih, a historic and influential association of German manufacturers of natural cosmetics; Ecocert, the world's leading certification body in organic cosmetics; Cosmebio, an authoritative French association of producers of organic cosmetics; Soil Association, the reference point of the Anglo-Saxon organic world, in America and the United Kingdom; and Icea, which now certifies more than 170 cosmetics companies in Italy.
The Cosmos standard became operational in April 2011, with hundreds of certified products in Italy, France and Germany. Five control bodies certify to this standard: Soil Association (UK), Ecocert and Qualité France (France), Ecea (Italy) and Ionc (Germany). Beginning on 1 January 2015, after the transition, the Cosmos standard will replace the various national certification systems currently used by its members and licensee companies.
There are two levels of certification:

- *Cosmos Natural with no obligation to use organic ingredients;*
- *Cosmos Organic with the dual obligation to reach 20% of organic of the total product by weight (which drops to 10% for aqueous products such as shampoo and dry products such as make-up powders), and to use 95% of what can be organic (extracts, butters, oils, ingredients obtained with only physical transformations).*

The Natrue standard - Natrue was founded in 2007 by some leading natural and organic cosmetics companies in Europe (mainly Germany) and its standard was defined in 2008. The first certified products date back to early 2009. Today, the Natrue symbol appears on more than two thousand cosmetics under 80 brands. The certification extends to 150 raw materials, manufactured by a dozen European companies, two of which are Italian.
The Natrue standard, affirmed especially in Germany and Switzerland, is spreading to other countries in Europe and beyond. In the United States, Natrue has partnered with NSF International (National Sanitation

Cosmos
Cosmos calls for the use of not more than 2% ingredients of petrochemical origin, limited to allowed preservatives and other substances for which there are still no natural alternatives.
The label includes the level of certification adopted, combined with the brand of the certifier. It is also mandatory to indicate the percentage by weight of organic ingredients.
The Cosmos standard, published at www.cosmos-standard.org, is run by a non-profit company, Cosmos Standard Aisbl based in Brussels. There are also two working groups that joined the board of directors in the management of Cosmos: the technical committee for management and updating of the standard and a group of certifiers to harmonize the certification procedures in different countries and between different organisms.

Foundation), an independent international organisation that certifies products and sets standards, accredited by ANSI (American National Standards Institute).
In 2010, Natrue and NSF signed an agreement for the mutual recognition of natural cosmetics with organic ingredients, corresponding to the second level of Natrue certification (natural cosmetics with organic components) and the NSF/ANSI 305 standard (products containing organic ingredients). Both are working to develop a common standard on natural cosmetics (first level of Natrue certification and NSF/ANSI standard 384).
The certification is issued by independent third parties approved by Natrue. To date, there are about twenty worldwide, including five in Italy: Bioagricert, Ccpb, Certiquality, Ecogruppo Italia and Suolo e Salute (soil and health). A sixth Italian body, Bios, has set up an accreditation process.
There are three levels of certification:
- Natural cosmetics
  Guaranteed minimum of natural ingredients and maximum allowance of ingredients of natural origin;
- Natural cosmetics with organic ingredients
  70% organic plant ingredients;
- Organic cosmetics
  95% organic plant ingredients.

The certification of organic cosmetics in Italy

In Italy there are seven accredited inspection bodies, six of which have been involved for many years in organic agri-food, which have developed their own voluntary specifications for organic and natural cosmetics. The bodies may also certify on the basis of other private standards on cosmetics, both Italian (like AIAB or Socert) and European (such as Cosmos and Natrue).
These seven bodies are joined by the Demeter association, which certifies biodynamic agri-food production, as well as compliance with its own specification on biodynamic cosmetics.
In fact, the certification of natural and organic cosmetics in Italy is polarised around the two European standards, with Icea promoting the Cosmos consortium on the one

Natrue
Products have been divided into 13 categories, each with a minimum level of natural substances and a maximum of substances of natural origin. A unique brand identifies Natrue certified products, while the specification of level of certification is currently optional.
Water cannot be included in the calculation of percentage of natural substances. Thus, in a product containing 80% water and 5% vegetable juice, the percentage indicated as natural will not be 85%, but 5%. The criteria of the Natrue standard are published on natrue.org.
Natrue is a non-profit organisation. The benchmark for companies and certification bodies is the Natrue International Label Management Center, based in Brussels, which promotes the brand and handles administration.

hand, and a larger group of Natrue-accredited bodies on the other.

Bio-ecological detergents

Parallel to cosmetics, and with the same assumptions of environmental and health protection, bio-cleansing is being developed, including a wide range of products: those for dishes and dishwashers and those for hand washing and washing machines, cleaning products and those for household hygiene.

The alternative to conventional detergents of petrochemical origin focuses on:

- environmentally friendly products, effective and safe for humans and the environment;
- ingredients derived from raw materials of plant or mineral origin;
- organic raw materials and/or fair trade.

Table 2 - Organic and natural cosmetics - monitoring organisations in Italy as of 30-06-2012

Organism	Own standard	Other standards
Bioagricert	Natural Origin	Natrue natural cosmetics
	Natural Cosmetic	Natrue natural cosmetics with organic ingredients
	Bio-organic Cosmetic	Natrue organic cosmetics
CCPB	Natural Cosmetics	Natrue natural cosmetics
	Organic Cosmetics	Natrue natural cosmetics with organic ingredients
		Natrue Cosmesi bio
Certiquality	Cosmetics with organic ingredients	Natrue natural cosmetics
		Natrue natural cosmetics with organic ingredients
		Natrue organic cosmetics
Demeter	Demeter-Biodynamic Cosmetics	
Ecogruppo Italia	Ecosmetica Quality Natural Certification	Natrue natural cosmetics
	Ecosmetica Quality Natural Certification	Natrue natural cosmetics with organic ingredients
		Natrue organic cosmetics
ICEA	Eco Bio Cosmetics	Cosmos Natural
		Cosmos Organic
		Lav - stop testing on animals
Q certifications	SoCert Cosmetics	
	Bio Eco Cosmetics Aiab	
Suolo e Salute	Biocosmesi Verde	Natrue natural cosmetic
	Biocosmesi	Natrue natural cosmetic with organic ingredients
		Natrue organic cosmetics

Source: Bio Bank.

As is already the case for organic and natural cosmetics, for bio-ecological cleaning there is also a major focus on packaging with recycled, recyclable or refillable bottles and increasing sales on tap, especially in health food stores and in Botteghe del Mondo (world shops).
The only European certification system currently in force for detergents is the Ecolabel, focussed on the environmental impact of products (biodegradability and aquatic toxicity), without any reference to the origin of raw materials. In the same vein, the official certification in Scandinavian countries is Nordic Swan, equivalent to the Ecolabel though more restrictive.

For organic detergents, the existing standards are currently those of the French certification body Ecocert and the Belgian Ecogarantie agency. In Italy Abcert, Biagricert, Ecogruppo Italy, Icea and Suolo e Salute have disciplined organic detergents.
With the aim of developing a single European standard shared by several countries, a table for bio-ecological cleansers has been promoted by, Italian, French and Belgian manufacturing companies. It is the beginning of a process to give an identity to a sector with good potential, on which at present there are no market data or surveys.

APPENDIX
LINKS

European Commission
http://ec.europa.eu/agriculture/organic/home_it

MIPAAF
SAQ X – Organic Farming
Web: www.politicheagricole.it

AIAB - Italian Association for Organic Farming
Web: http://www.aiab.it

AMAB - Mediterranean Association for Organic Farming
Web: http://www.amab.it

ANABIO - National Association for Organic Farming - CIA
Web: http://www.anabio.it

AQB - Organic Quality Association
E-mail: aqbmia@tin.it
Web:

ANAGRIBIOS - Coldiretti
http://www.coldiretti.it/anagribios/anagribios.htm

FEDERBIO - Italian Organic and Bio-dynamic Farming Federation
http://www.federbio.it

TERRA SANA ITALIA - National Union of Organic Producer Associations
E-mail: terrasana@tin.it
Web:

SINAB
Web: www.sinab.it

UNAPROBIO – National Organic Producers Union
Web: www.unaprobio.it

Italian Association of Organic and Biodynamic Livestock (ZooBioDi)
Web: http://www.zoobiodi.com

AGRI BIO
http://www.agribionotizie.it

AAB (Association for Biodynamic Agriculture)
http://www.rudolfsteiner.it/biodinamica

FIBL – Institute for Research in Organic Farming
www.fibl.org

Italian Network for Research in Organic Farming (RIRAB)
www.rirab.it

International Centre for Research in Organic Food Systems (ICROF)
www.icrofs.org

International Federation of Organic Agriculture Movements (IFOAM)
www.ifoam.com

International Society of Organic Agriculture Research (ISOFAR)
www.isofar.org

Organic EPrints
www.orgprints.org

Organic Research Centres Alliance (ORCA)
www.fao.org/organicag/oa-portal

Organic Trade Association (OTA)
www.ota.com

Technology Platform on Organic Farming (TP Organics)
www.tporganics.eu

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