

Organic Farming in Europe: Situation and Prospects

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The views expressed in this text are those of the author and do not necessarily reflect INRA thinking.

It was an excellent saying of his who named husbandry "the mother and nurse of all the arts," for while agriculture prospers all other arts like are vigorous and strong, but where the land is forced to remain desert, the spring that feeds the other arts is dried up; they dwindle, I had almost said, one and all, by land and sea.¹

Xenophon, The Economist, V, 380 B.C.

There is no art in the world demanding greater philosophy than agriculture.²

Bernard Palissy, 1510-1589.

The generations as they pass along sweep out of sight the last fragments of the idols they found on their path and set up other gods, --to be overthrown like the rest.³

Balzac, Sons of the Soil, Chapter IX, 1844

Summary

This article analyses the current position, the issues and prospects of organic farming in the world and particularly in Europe. A first section asserts the weakness of the current world organic market (less than 1% of the food market), but also its strong growth over recent years. In Europe the sales of organic produce, very variable according to countries, remain, on the whole, (very) modest per head though they are on the increase. Consumer motivations mostly connect with health, the

¹ Translation by H. G. Dakyns

² Translation by the translator of this paper

³ Translation believed to be by Katharine Prescott Wormeley

environment, taste, animal welfare. A second section looks at the increase of organic farmland in the world, in Europe and in France, along with a rapid historical overview of its slow emergence over the 20th Century. Finally an analysis of what holds up the expansion of organic agriculture takes up the third part: limits to consumer purchase growth, some difficulties encountered by producers, competing demands for land, developments in supermarket distribution, internal dissensions, to end up stressing the need for agriculture as a whole – not just a small component of it to become more sustainable.

Introduction

Organic agriculture has the wind in its sails: growing markets, expanding areas, an image packing in harmony with the environment, quality, health, wholesomeness, the whole lot rooted in tradition while thoroughly modern. Is it about to spread and achieve in return an increased recognition from society and authorities or remain low in volume and area? Is it to remain a luxury form of agriculture enjoying a genuine following but a niche positioning involving a tiny fraction of the world population or to grow its share of the overall consumption? Has it completely outgrown its original social marginality, or has it become a new kind of marginality, that of a rather “de luxe” product chosen essentially by devotees and purchased only episodically by the rest of the population? Lest we forget, its sales represent less than 1% of the world food market in 2005, a niche, but modest.

This paper will state the current position of organic farming both in terms of market and area, before turning to its prospects in the European and French contexts. The following points will accordingly be addressed: a slender but expanding market (I); limited areas but on the increase, though unevenly distributed between countries (II); Curbs to expansion in spite of recent years inroads (III)

I. A slender but expanding market

1.1 Position of the organic products market in the world and particularly in Europe at the turn of this century

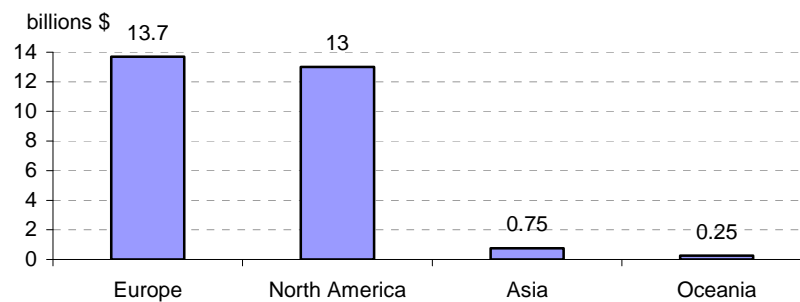
The organic farming market was worth 30 billion dollars in 2005, amounting to less than 1% of the world food market (estimated at around 3500 billion US dollars by the Institute of Grocery Distribution, IGD). This market is very unevenly distributed around the world: Europe accounts for the largest sales of organic products (\$13.7 billions in 2004, that is 49% of total sales), followed by North America (\$13 billions in 2004, or 47% of total sales). The other continents' organic market is comparatively weak: in 2004, \$750 million for Asia and \$250 for Australasia/Oceania, that is respectively 2.7% and less than 1% of overall world sales (table 1, figure 1) (Sahota 2006). In Africa, organic farming for the internal market barely exists but is more geared towards export.

However this sector has enjoyed regular growth over the last ten years or so, particularly in North America, Asia, Australasia/Oceania and attracts an interest in direct proportion with the benefits many ascribe to it.

Table 1. Organic products market in the world in 2004

(in billions of US dollars) (c.f. Sahota 2006).

Market per continent	World	Europe	North America	Asia	Australasia/Oceania
Market size (2004)	27.8	13.7	13.0	0.75	0.25
Growth in 2004 (%)	≈ 9	5	14	10-20	10-20
Leading zones or countries (% of region's total amount)	Europe (49%) North America (47%)	Germany (31%) UK (14%)	USA (94%)	Japan (50%)	Australia (82%)
Major distribution channels		Supermarkets	Supermarkets	Specialist retailers	Supermarkets

Figure 1. Organic products market in the world in 2004 (c.f. Sahota 2006)

Organic products sales vary hugely between countries, even in Europe (Fig.2). This is not just related to the differences in countries populations since if the yearly consumption of organic produce is calculated per head, that is per inhabitant of the country, (organic consumer or not), the expenditure levels are very uneven: in 2004, €105 in Switzerland, €51 in Denmark, €47 in Sweden, €42 in Italy and Germany versus less than one euro in Poland and Hungary, €2 in Greece, €4 in Norway and €6 in Spain and €26 in the Netherlands. So organic produce consumption could be first and foremost a cultural phenomenon more widespread among Germanic and Nordic peoples and in Italy than in the rest of Europe. Furthermore, even in the countries where sales are important in absolute value, their share of the food market remains very low, often almost negligible. So, in the EU this share is at its highest at 2.7% in Denmark, 2.5% in Austria, 2.2% in Germany and much less in other countries, these consumption orders of magnitude are reproduced in the United States, Canada and Australia. At world level – supposing that meant anything – organic products average consumption per year per person (organic consumer or not) levels off at around \$4 in 2004, below 1% of overall food expenditures.

It must be noted that organic food products expenditures in the several tables are approximate for it can prove difficult to get precise data for this market. This is particularly true at international level as comparisons between countries depend on exchange rates. Another difficulty arises from the delineation of the sector under consideration, which in some cases includes “natural products”, functional food, plants collected in the natural environment (e.g. medicinal herbs), or even non-food

products such as organic cotton. So that the data shown here essentially give orders of magnitude, this is particularly so for some countries short on precise research.

The organic market enjoys a significant growth in relation to many other food products. Its expansion from 2003 to 2005 had been estimated at around 5% to 10% a year in several European countries, and even at 15 to 20 % in the United States and 10 to 20 % in Canada (table 2, 3) (Kortbech-Olesen, 2006). Perceived as expanding, this market is attracting a great deal of interest.

Table 2. Evaluation of the organic food products market

in % of total food sales in 2003 and estimated growth in several European countries (Willer, Yussefi, 2003)

Markets	Retail sales (US \$ in millions) 2003	Share in overall food sales (%)	Anticipated yearly growth rate in % from 2003 to 2005
Germany	2800-3100	1.7 – 2.2	5 – 10
UK	1550-1750	1.5 - 2.0	10 – 15
Italy	1250-1400	1.0 - 1.5	5 – 15
France	1200-1300	1.0 - 1.5	5 – 10
Switzerland	725-775	3.2 - 3.7	5 – 15
Netherlands	425-475	1.0 - 1.5	5 – 10
Sweden	350-400	1.5 - 2.0	10 – 15
Denmark	325-375	2.2 - 2.7	0 - 5
Austria	325-375	2.0 – 2.5	5 – 10
Europe other	1000 – 1200		
Overall (Europe)	10000-11000	2.0 – 2.5	15 - 20
USA	11000-13000	1.5 – 2.0	10 – 20
Canada	850-1000	<0.5	-
Japan	350-450	<0.5	-
Oceania/Australasia	75 - 100		
Total	23000 - 25000		

Figure 2a. Total amount of organic products sales in a range of European countries in 2004

(in millions of euros) (c.f. Willer, Yussefi, 2006)

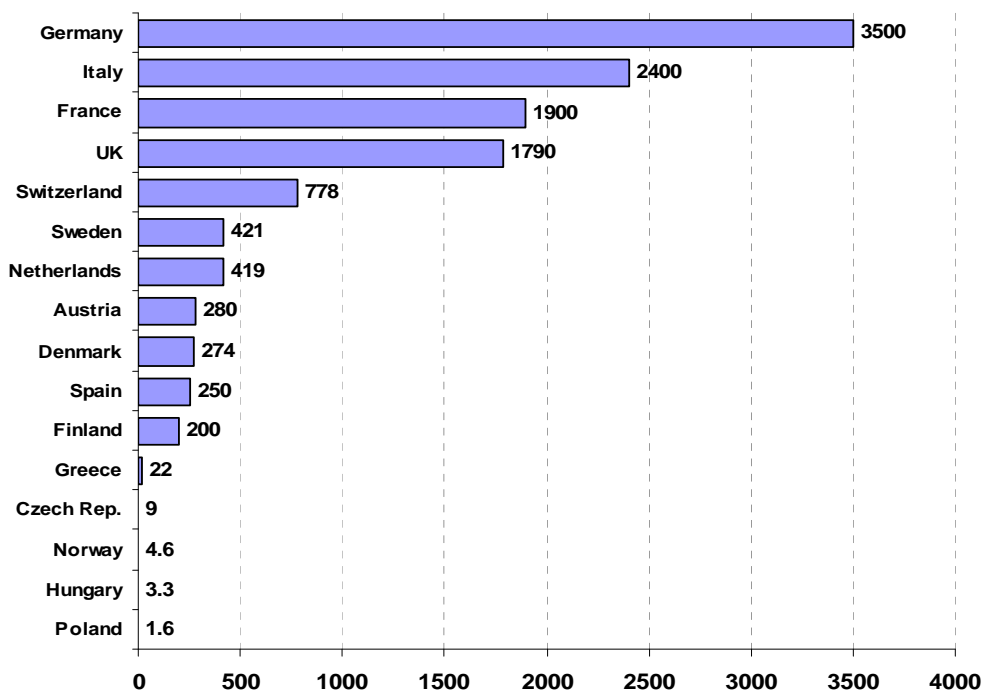


Figure 2b. Amount of organic products sales per head in several European countries as well as in the in USA, Canada and Australia in 2004 (c.f. Willer, Yussefi, 2006) (in euros per head, organic consumer or not)

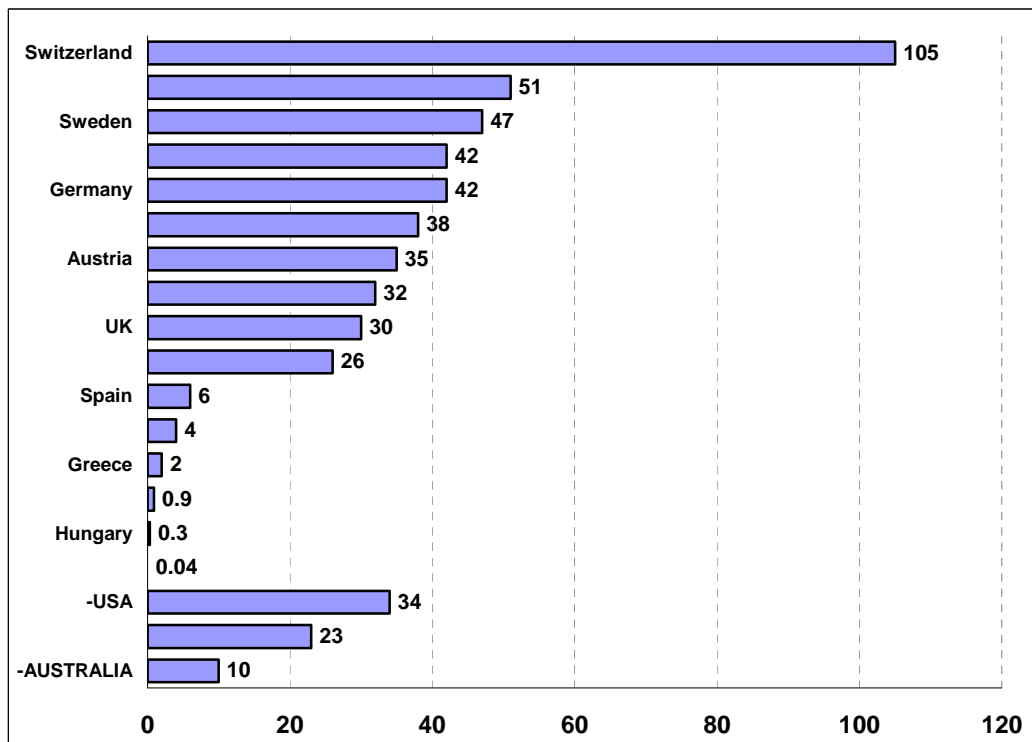


Table 3. Evaluation of organic products retail sales and of organic areas in the countries most implicated in the world (Kortbech-Olesen, 2006)

Countries	Retail sales in 2004 in million € or \$ or £	Retail sales in 2005 in million € or \$	Organic land area (1000 ha) in 2004	Organic land area in % of total area	Number of organic farms
Germany	3500 €	4000 € (5100 \$)	767.89	4.5	16603
Italy	2000 €	2200 € (2700 \$)	690.27	6.2	36639
France	1900 €	2000 € (2500 \$)	534.04	1.8	11059
UK	1213 £	1350 £ (2500 €)	954.36	4.4	4500
Switzerland	792 €	-	121.39	11.3	6373
Sweden	421 €	-	206.58	6.8	3138
Netherlands	419 €	-	48.15	2.5	1469
Denmark	335 €	-	154.92	5.8	3166
Australia	205 \$	-	12126.63	2.7	1832
Japan	400-900 \$	450\$ - 1200 \$	29.15	0.6	4539
USA	12700 \$	15000 \$	889.05	0.2	8035
Canada	850-1000 \$	1000 \$ - 1200 \$	488.75	0.7	3673
World	27000-27800 \$	30000 \$ -32000 \$	31502.8		

1.2 Factors accounting for the current success of organic products with the consumers.

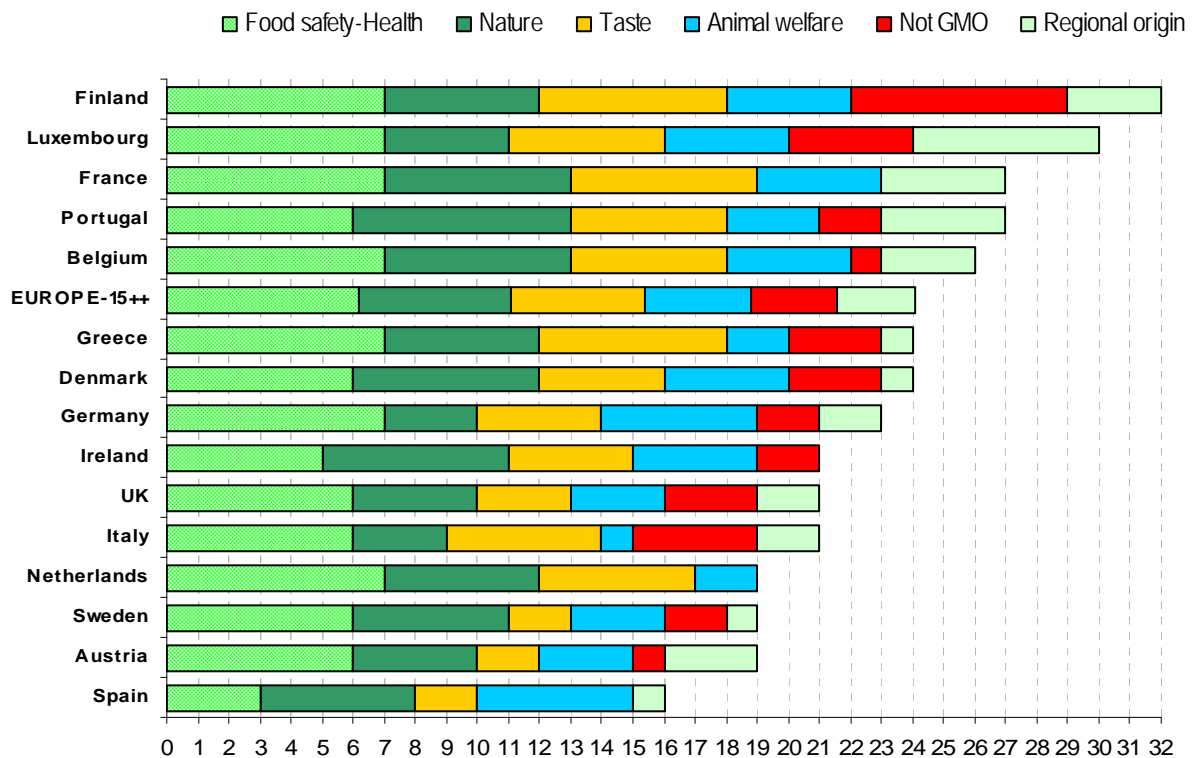
The answers to this question are many, relating as much to the food scares of the late nineties as to concerns regarding some technological fallouts: they convey the need of a greater trust at the social level and a desire of return to nature at the personal level. A gamut of surveys provides an insight on the factors leading to the purchase of organic produce. For instance the research carried out in the framework of the European project OMIaRD (Organic Marketing Initiatives and Rural Development, 2001-2004) has arrived at a league table of purchase motivations in 2001 in the main European countries involved (fig. 3, tabl. 4). They vary according to countries but health and food safety considerations are often found at the top, along with concerns for the environment or indeed the flavour of the products, animal welfare, absence of GMOs, regional origin, or the positive image

added by factors such as fair trade. An evolution of consumer motivation can be registered over the years: In the 70s they were mostly militants with ecologist leanings or concerned with some aspects of food production. Today, more customers are motivated first by health or taste of the product.

Table 4. European consumers' rating of buying motives for organic products in 2001 (rating from 1 to 7 by degree of importance, 7 being the highest) (CBI, 2005)

Country	Food health and safety	Nature conservation & environmental protection	Taste	Animal welfare	Not GMO	Regional origin	Other
Austria	6	4	2	3	1	3	3 Beauty and wellness
Belgium	7	6	5	4	1	3	2 Fair trade
Denmark	6	6	4	4	3	1	5 Cautiousness
Finland	7	5	6	4	7	3	-
France	7	6	6	4	-	4	-
Germany	7	3	4	5	2	2	-
Greece	7	5	6	2	3	1	4 Curiosity
Ireland	5	6	4	4	2	-	-
Italy	6	3	5	1	4	2	-
Luxembourg	7	4	5	4	4	6	Prestige
Portugal	6	7	5	3	2	4	1 Fair trade
Spain	3	5	2	5	-	1	6 Positive image
Sweden	6	5	2	3	2	1	-
Netherlands	7	5	5	2	-	-	-
UK	6	4	3	3	3	2	-
EU-15	6.2	4.9	4.3	3.4	2.8	2.5	-
Czech Rep.	7	4	6	2	1	2	-
Slovenia	5	3	6	2	2	4	-

Fig 3. European consumers' rating of buying motives for organic products in 2001 (each feature rated from 1 to 7 by degree of importance, 7 being the highest) (CBI, 2005)



However, it is not that easy to answer questions on the motivations or characterisation of the organic clientele on the basis of consumer surveys for this poses problem. First there is a distinction to be made between those organic consumers who have taken a personal and deliberate option for these products and those who have taken it, so to speak by default as they consume the organic goods chosen by the party in the household who does the food shopping. Besides, much of organic produce consumption is very circumscribed and concerns only one or a few products, for other people, it is occasional, as the opportunity arises, whereas others are major consumers, actively seeking these products. Hence we find a very broad range of consumption types and of consumers, from those who never buy an organic product to those who buy them sometimes or for specific foodstuffs, to those who systematically seek them, even if it means significantly longer journeys and shopping time. The motivations of those diverse types of consumers are not the same. Though several surveys have been carried out on the frequency of purchase or motivations, they are not so easy to compare, interpret or synthesise, the more so since, when consumption is occasional, the recollection of purchase may be imprecise in terms of date and frequency. Finally this type of survey is affected by the way the questions are framed and put across.

Broadly speaking, organic products consumers endow them with numerous positive features: use of healthy and natural raw materials (“living” not “chemical”), use of environmentally friendly techniques, concern for animal welfare, etc.... This entails benefits not only at individual health level

but also at social and environmental levels. Two dimensions of quality are actually at stake. The organoleptic attributes of organic produce, directly experienced by the consumers include appearance, colour, shape, taste, smell, texture. But these physical qualities will not do, the production must be confirmed by a label verifying the actual observance of organic practices. This turns these products in “credence goods” resting on specifications and the conviction that organic farming impacts positively on the natural and social environment, society, the future of farming, and a number of ethical issues, etc. (Midmore et al. 2005, Midmore, Wier, Zanolli, 2006).

In last analysis a major strand emerges from the range of surveys: purchase motivations associate organic food with health, environment, ethical issues, taste, and sometimes the preservation of a more human dimension to the countryside. In France the CSA/Agence BIO indicator studied the perception of organic products and the specific features attached to their consumption using a representative sample of 1042 people in October 2005. Questioned on a list of positive attributes of these products, a majority – including non-organic consumers – were in agreement with the statements characterising them as:

- contributing to the preservation of the environment,
- more natural since grown without the aid of chemicals,
- better for health,
- respecting animal welfare,
- better for the preservation of food’s nutritional value,
- better to taste.

The levels of agreement with these qualities are significant, including for non-users (tabl.5): organic products therefore project a positive image with regards to the environment, health, animal welfare. However the non-consumers appear less convinced when it comes to conferring them a better taste, better preserved nutritional value or a favourable impact on health: the gap in approval is significant according to the circumstances of the person questioned (user, occasional user, non-user of the products)

However, and according to the same CSA/Agence BIO survey, more than half of French people (55% and 53%) never buy or consume biological products or do so less than once a month. The survey of households living conditions (*EPCV*) carried out by the INSEE⁴ shows in 2005 an even higher proportion than these. To a question on “purchase over the past few months in a organic shop or from a supermarket’s organic range”, only 21% of the people (out of a total of 6210 households) answer positively against 45% in the CSA/Agence BIO. In the latter case, however, the question bore on all purchases of organic products – allowing for purchases on the local market or by direct sale, which may explain the best part of the discrepancy between the two surveys, though probably not all of it. So that more than half of French people never buy or consume organic products – or only rarely.

⁴ the [French National Institute](#) for Statistics and Economic Studies. It collects and publishes information on the French economy and French society, carrying out the periodic national census. Located in Paris, it is the French branch of the European Statistical System. (definition Wikipedia)

Table 5. Level of agreement on a range of stated qualities of organic products in France (survey October 2005 on a representative sample of 1042 persons) (CSA/Agence BIO, 2005)

The question asked was: *"I am going to submit to you a number of phrases people have used to describe organic products. Would you please tell me, for each one, whether you strongly agree, somewhat agree, somewhat disagree, strongly disagree"*.

Qualities stated:	Level of agreement					% agreement (strongly or somewhat) among:		
	strongly agree	somewhat agree	somewhat disagree	strongly disagree	No opinion.	organic products consumers	non-consumers	shoppers
Help preserve the environment	46	41	6	2	5	98	78	95
More natural as grown without the aid of chemicals	54	31	8	3	4	98	73	94
Better for health	44	34	10	4	8	97	61	92
Respects animal welfare	39	38	9	4	10	92	63	89
Nutritional qualities of foodstuffs better preserved	33	34	13	4	16	87	48	80
Better taste	34	28	18	6	14	87	41	79
Traditional production processes	27	35	22	8	6	74	51	70

Of those who had not bought organic products for a month, or never buy any, CSA/Agence BIO asked the reasons for their disinterest. Among the most frequently chosen disincentives in the list suggested high prices stand out, with the absence of conditioned/impulse buying followed by lack of trust and scepticism, lack of information, poor quality of the products and finally the absence of organic products in the customary shop (figure 4)

Finally what characterises regular consumers? In France according to the above-mentioned CSA/Agence BIO survey, consumers are mostly female, people aged between 35 and 64 (and less frequently young people under 24), living in large cities. The organic foodstuffs they most frequently purchase are in decreasing order: first fruit and vegetables, next eggs, milk products other than milk and cheese (yoghurts, butter, etc...), then bread, poultry, groceries, then cheese, milk, alternative cereals, finally meat and lastly wine

In 2005, another survey was conducted on an international scale on a non-representative sample by marketing researchers AC Nielsen. The persons surveyed were interviewed via the Internet in 38 countries with a sample of 500 persons per country and 1000 persons in the more populated countries. From their use of the Internet, it can be inferred that they are younger people, with an above average education and income level. Questioned on their motivation for buying organic

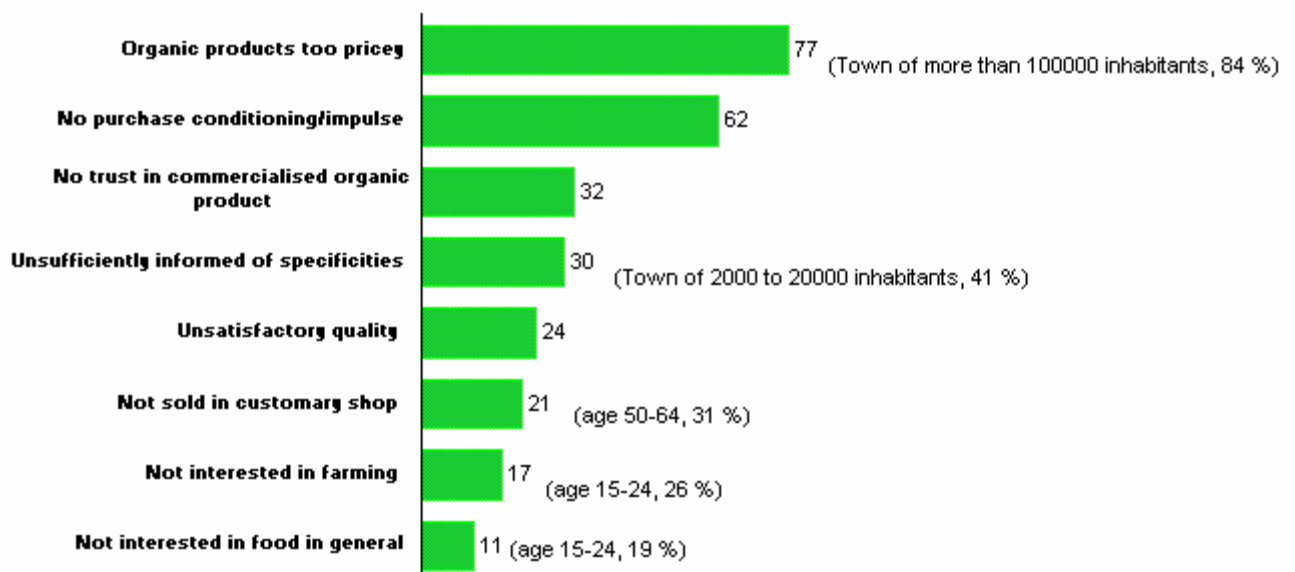
products, the respondents, in their vast majority, advance their health and that of their children, then the environment and finally animal welfare but with very noticeable variations by countries and major world regions (fig. 5):

- One’s own health is the most frequently advanced argument with 51% of motivations, but much more frequently in Asia (Indonesia 66%, Malaysia 66%, Philippines 66%, Thailand 64%), in North America (USA 60%) and some Latin American countries (Brazil, Mexico).
- One’s children’s health makes up 17% of motivations, but it is more frequently put forward in Indonesia (37%) Mexico (34%), Brazil (30%), and Turkey (28%).
- Environmental motivations– on average 15% – are more important in the Philippines (52%), Sweden (51%), Hong Kong (51%), Norway (47%), South Africa (47%), Thailand (47%), France (46%) and the European countries (19% of motivations on average for the whole sample).
- Finally animal welfare accounts for 7% of the reasons quoted on a world scale, but it rates much higher in Austria (50%), Germany (47%), Sweden (44%), Switzerland (40%), the Netherlands (33%), Norway (24%). In short it mostly gets a mention in Europe and hardly ever elsewhere apart from South Africa.

Fig. 4. Frequency for the reasons of non-purchase of organic products respondents chose from a preset list (in % of answers, several answers accepted) (CSA/Agence BIO, 2005).

Basis of the survey: Those who did not buy any organic products over the past four weeks or never buy any (N = 569). Question: I am going to run by you a number of statements; for each one, can you tell me whether yes or no, it is a reason for which you have not, recently or ever, bought organic products?"

The frequencies to the right of the figure correspond to the proportion of this response in the categories where it is high in comparison with the population overall.



Conversely the diverse reasons for not buying organic products range from their high price, (40% of reasons given) followed by their not being available in the customary shopping environment (17%) and finally doubts regarding their stated attributes (14%) (figure 6). The high cost of organic produce is the most frequently given reason in Holland (62%), in the UK (61%), in Italy (56%), New Zealand, (54%), Germany (54%), Ireland (54%), Japan (52%). The non-availability in customary shop comes up mostly outside Europe, (Philippines, India, Mexico, South Africa, Thailand, Indonesia, Brazil, etc...). Finally doubts concerning the respect of organic production methods are often expressed in Taiwan, Korea, China, Austria, Greece, Mexico, and Switzerland whereas doubts concerning health benefits come to the fore in Russia, Turkey, Finland, New-Zealand and Denmark.

All told, organic farming enjoys an excellent image and good reputation overall. Yet, in economic terms its market share seems narrow, with the exception of a few countries, even though its high growth rate by comparison with others makes it very attractive. However organic farming has a symbolic dimension much greater than its market as measured in purely economic terms. The trend it represents, with its health and environment friendly aura has on the media and on current thinking an impact much greater than its actual economic import. This latter element must not be overlooked as it is precisely at that economic level where the effective translation from thinking to action operates.

Fig. 5. Main reasons for buying organic products broken down by world regions, sample of 21261 persons from 38 countries answering via the Internet from 11 April to 10 May 2005 (in % of respondents) (ACNielsen, 2005)

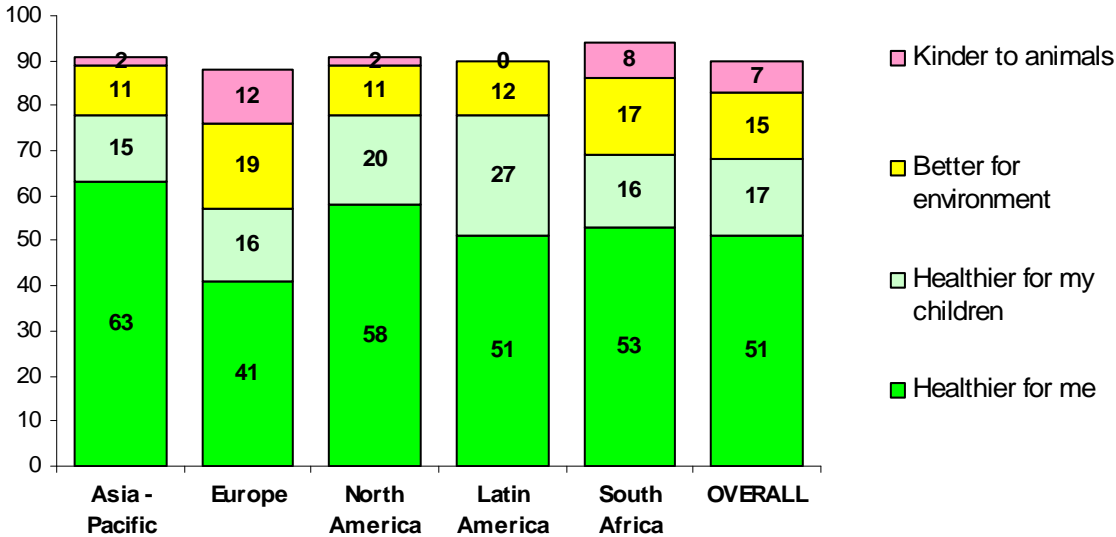
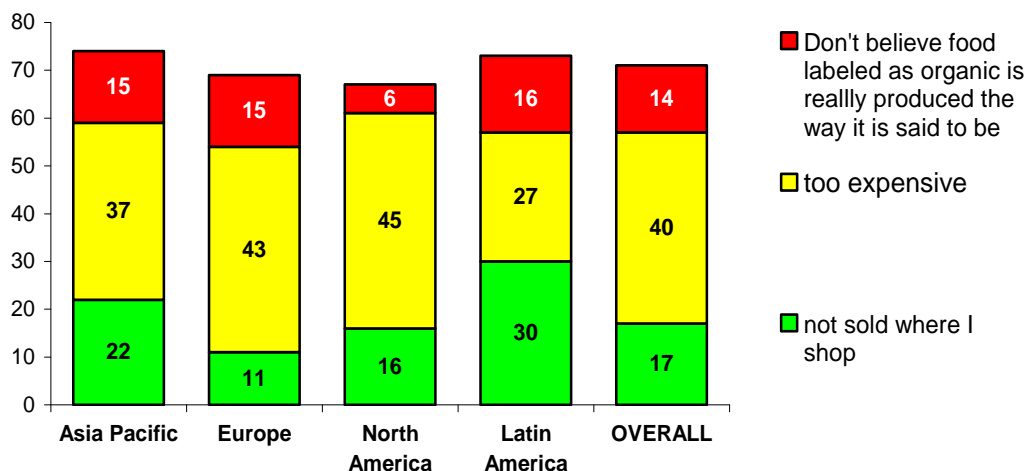


Fig. 6. Main reasons for not buying organic products broken down by world regions, sample of 21261 persons from 38 countries (500 or 1000 persons per country) answering via the Internet from 11 April to 10 May 2005 (in % of respondents) (ACNielsen, 2005)



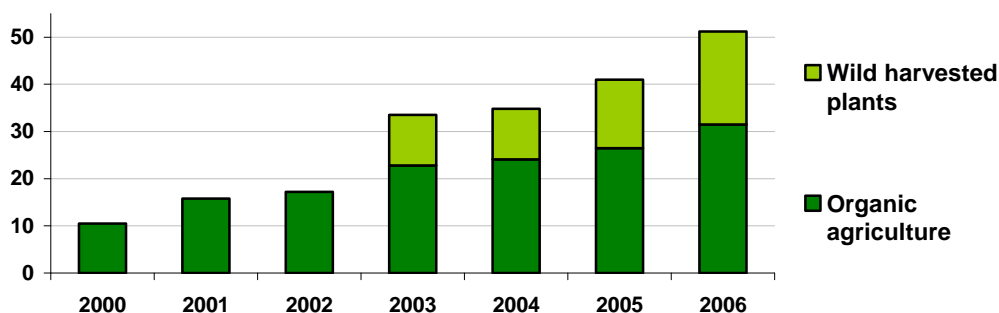
II. Low share of farmland unevenly distributed among countries, but increasing.

2.1. World situation.

Over the past few years, organic farming has experienced an important progression on a world scale and in 2006 it took up an area of 31 million ha with a particularly noticeable surface in Australia (12.1 M ha); as against that, it was weak in North America and Africa (fig. 7). Studies of the countries farming the largest proportion of land organically yields a different ranking as a result of the disparity in farm size according to countries, disparity which is reflected in organic farming. Thus Liechtenstein, Austria and Switzerland are the countries where the share of organically farmed land is the greatest whereas Mexico, Indonesia, Italy, the Philippines and Uganda are the countries boasting the largest number of farms run on the organic model. Organic farming is thus an international phenomenon but unevenly distributed among countries (fig. 8).

Fig. 7. Area of organic farming in the world (millions of ha) (Yussefi, 2006).

a/ Evolution from 2000 to 2006 (This figure also takes into account zones where wild plants are collected)



b/ distribution by continent

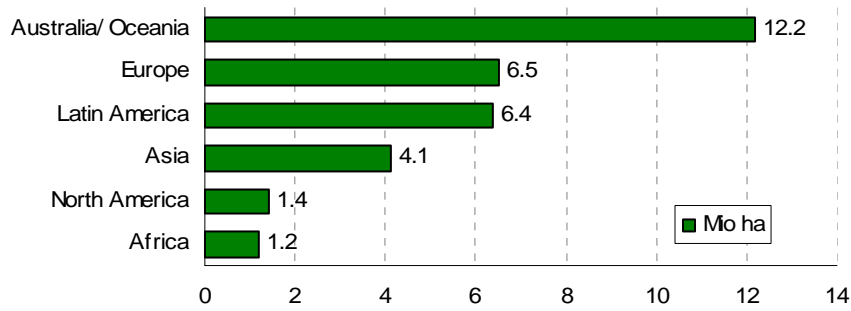
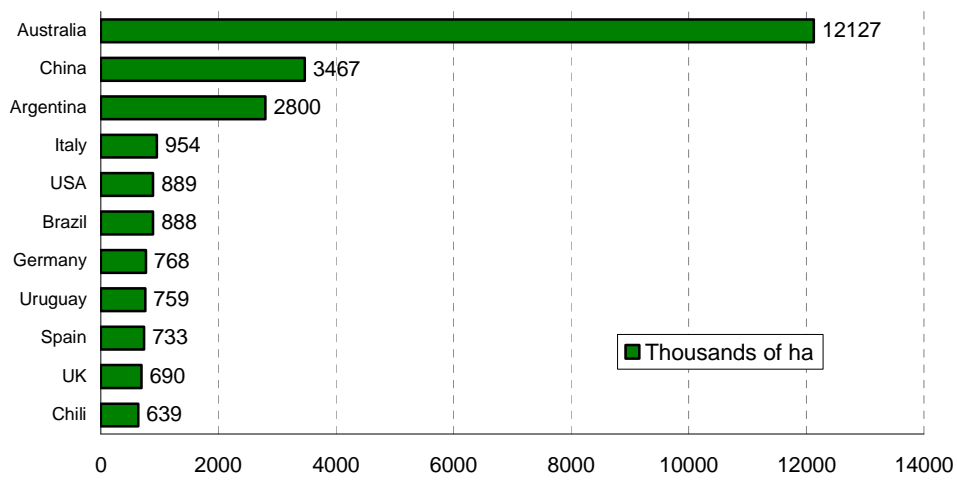
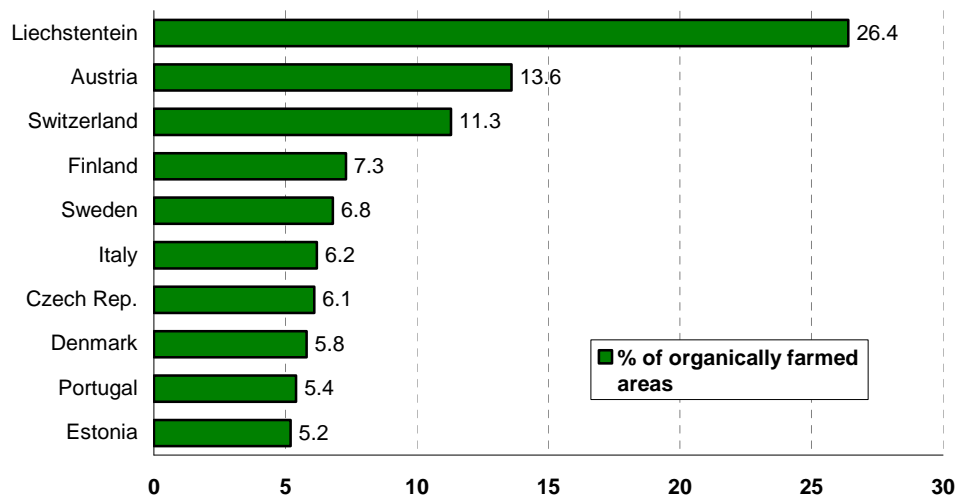


Fig. 8. The top 10 countries where organic farming is best represented in the world (Yussefi, 2006).

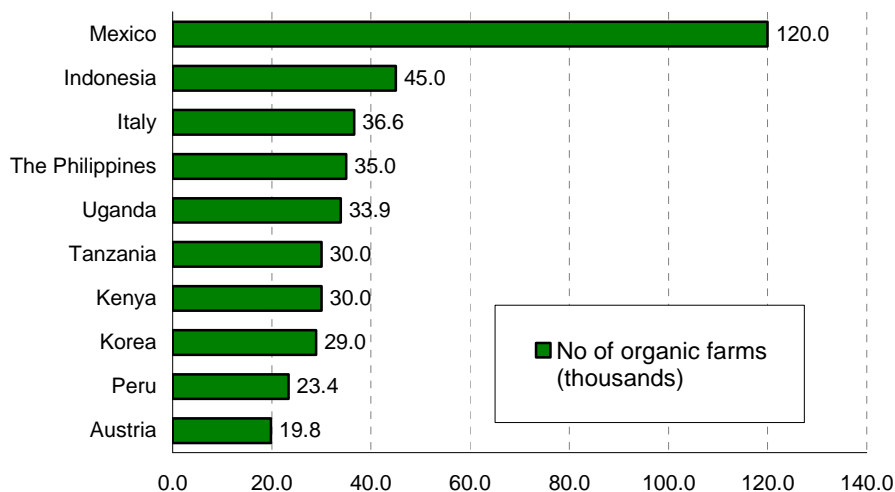
a/ countries with the largest organically farmed areas overall



b/ countries where the share of organically farmed areas is the highest (% of organically farmed land)



c/ countries with the largest number of organic farms (No of farms in thousands)

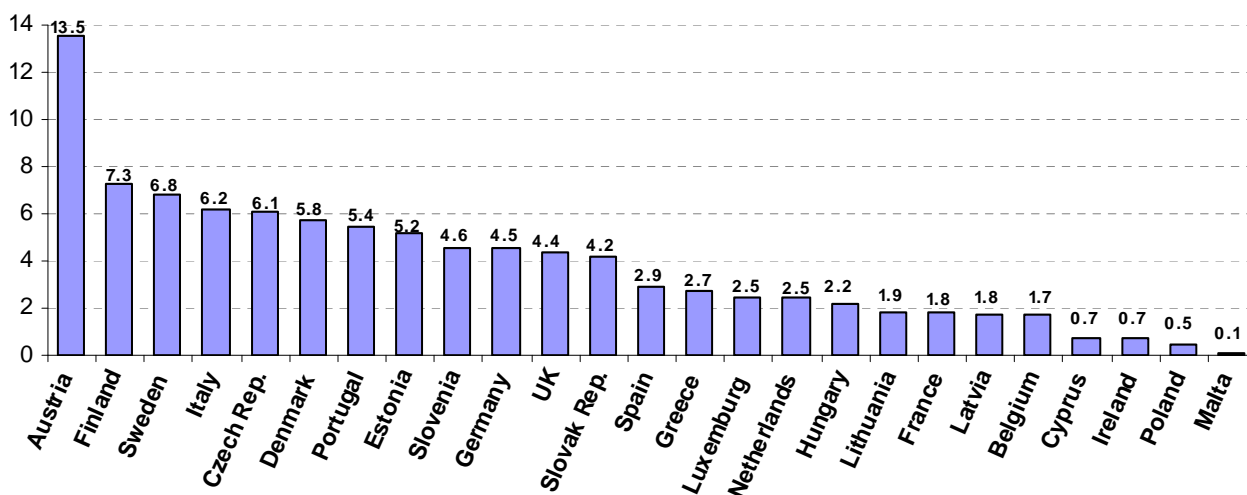


2.2 Organic farming in Europe.

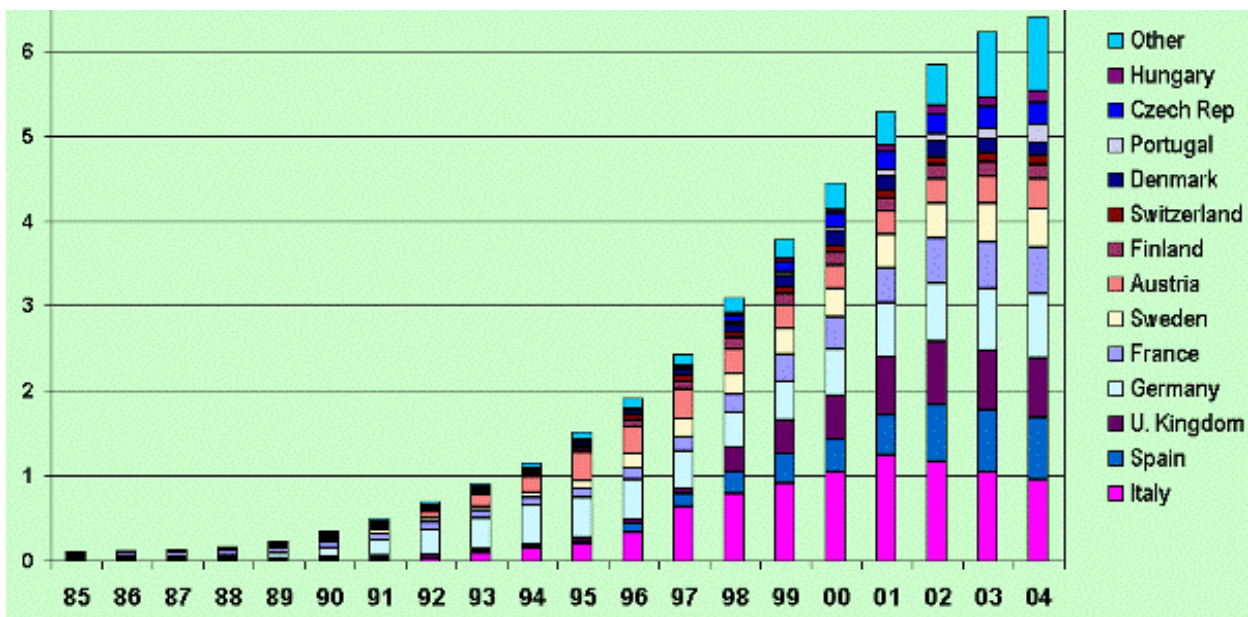
In Europe, there also exist major discrepancies between countries. Thus, taken overall (EU-25, plus the four applicant countries and the EFTA countries) organic or in-conversion farmland amounts to 6.4 million hectares in 2004, that is 2.9 % of exploited farmland, broken down into 181.900 farms. In the EU-25, the total area organically farmed accounts for more than 6 millions ha divided between 155.000 farms (fig. 9). But the organic share of farmland in different countries varies greatly and ranges from 13.5 % to 0.1 % (fig. 9). From one year to the next different countries will progress variously as well: some witness an increase in their organically farmed area while it is dropping elsewhere. But whereas organic farming is often presented as a means to sustain small size holdings, in EU-25, organic holdings, in many countries, occupy areas on average larger than the overall average farm size, sometimes significantly so.

Figure 9. Progression of organic farming over the last 20 years in Europe

a/ Percentage of areas organically farmed in 2004 in every EU-25 country (c.f. Willer, Yussefi, 2006)

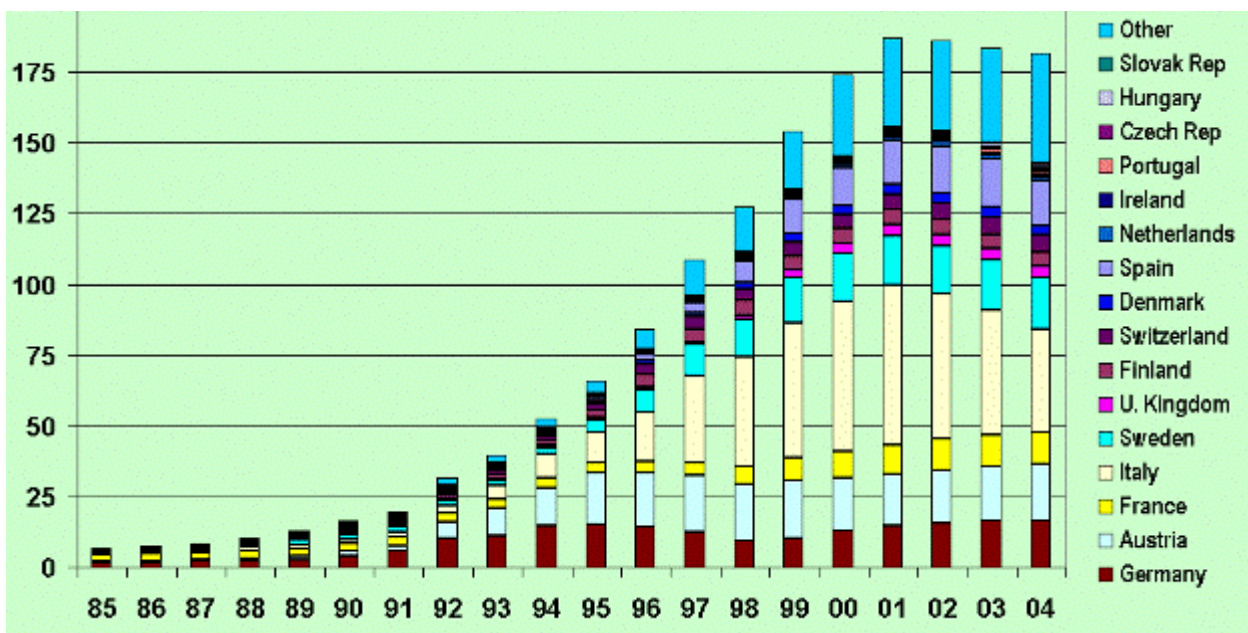


b/ evolution of organically farmed and in-conversion areas over 20 years (million hectares) (EU-25, plus 4 applicant Countries and EFTA countries). Source: OCW, 2005.



c/ progression in the number of organic and in conversion holdings in the EU-25 (in thousands).

Source: OCW, 2005.



2.3 Organic Farming: a European Genesis

Organic farming is a movement born in the first half of the 20th Century in reaction to the industrialisation of farming (Viel, 1979). Several founding fathers presided over the birth of its varied trends. On the one hand biodynamic farming started in Germany and Austria under the aegis of Rudolf Steiner who published in 1924 "*The Agriculture Course, The Birth Of The Biodynamic Method*", the contents of a series of lectures on the principles of biodynamic agriculture delivered at Koberwitz (now in Poland); his ideas were disseminated by his disciple Pfeiffer. A few years later, in England Sir Albert Howard was at the forefront of British organic farming and remains influential through his 1940 book, "*An Agricultural Testament*" drawn from his observations and experiences on composting and soil health in India. In Switzerland, Hans and Maria Müller and Hans Peter Rusch evolved a more scientific form of organic farming stressing among other things microbial soil properties, which was popularised by Rusch's book *Bodenfruchtbarkeit* (Soil Fertility)⁵, published in Switzerland in 1968. In the United States the movement was popularised by Rodale and his publishing house.

For its part, France was a pioneering country in the implementation of organic farming at the beginning of the 60s: the GABO⁶ came into being in 1959 and AFAB⁷ in 1962. It benefited from the backing of Société Lemaire-Boucher - then marketing a calcareous alga sold as a fertilizer known as lithothamne - and the consumer association, Nature et Progrès. By the 70s, the movement had evolved: it was taken up by Green movements who saw it as a way to resist dominant society structures. The first were farmers who could not or would not follow the modernisation trend or who wished to avoid the use of synthetic chemicals as a result of health issues touching them personally or their livestock. Thereafter, during the 70s, the movement would encompass, among others, a section of the neo-peasantry (Savini, 2005).

At first, organic farming in France was a minority trend, operating outside existing farming structures and standard distribution networks and riven by internal divergence. The very name of organic farming was a bone of contention between its adepts and the scientific or professional bodies who held that the word "organic" was not "*suitable given that it relates in fact to all that has to do with life. For indeed, by definition, all farming has to do with the life of plants as well as animals and is therefore of necessity organic. That is the reason why this farming approach has been called 'farming without synthetic chemicals' a term more in keeping with the facts than 'organic farming'*" (Bonny, Le Pape, 1984). But it would gradually enjoy recognition at regulatory level, then economic support, which would help it structure itself and favour its development. The stages towards this recognition would prove lengthy and at times somewhat convoluted. Recognition for organic farming was included in the 1980 agriculture bill; it materialised into a National Commission for Organic Farming responsible for the approval of specifications in 1983, then of a first "AB⁸" logo in 1984. At EC level, the definition, regulation and thus a degree of legitimisation of this type of farming occurred in 1991 and in 1992, with the adoption of joint specifications for vegetable produce. In France organic produce became certified in 1993: holdings and processing firms are subjected to the regular controls

⁵ This book does not appear to have been translated into English

⁶ (*Groupement des Agriculteurs Biologiques de l'Ouest* Western France Organic Farmers' Group)

⁷ (*Association Française de l'Agriculture Biologique* French Association for Organic Farming)

⁸ Agriculture Biologique = Organic Farming

of organisations accredited by the authorities; The AB logo is restricted to certified produce. At Community level an AB logo was created in 2000 (Savini, 2005).

A range of official support policies exists in Europe. Development has been encouraged for reasons that vary with the countries: the opportunity to support and boost farming on difficult areas (Southern Italy, Austrian high ground), need for alternative farming in highly populated and polluted zones (Netherlands) or increase of production for export. The 1992 CAP set up aids for holdings in-conversion to organic farming as it saw this type of farming as a way to meet the needs to protect the environment while reducing surplus production. They are aids to the improvement of agricultural practices: they aim to assist holdings during the adjustment period and to compensate for the shortfall accompanying the conversion phase which often sees a drop in yields whilst the produce cannot as yet be upgraded and benefit from the organic premium. The widespread use of these aids would have been instrumental to the strong rise in organic farmland in countries like Austria and Italy (Savini, 2005).

Although it recognised this type of farming as early as 1980, France committed more slowly to policies encouraging it. As a result, organic farming there today is less advanced than in other countries (figures 9, 10, 11), growing demand notwithstanding. With this in mind, in 1997, the Ministry in charge of farming moved to take the initiative of a pluriannual plan to develop organic farming setting ambitious targets for 2005, and provided for aids to in-conversion and a range of actions in the field of research and education. But in 2003 Député⁹ Martial Saddier's report showed yet again France lagging behind as regards organic farming, causing the Ministry for agriculture to promote fresh measures for the advancement of this production set-up in 2004.

Meanwhile, European subsidies can be expected to continue: they fit in with the redirection of farming subsidies towards aids to producers justified by environmental targets. But beyond this 20-year growth period, what are the prospects of organic farming?

⁹ MP

Fig. 10. Growth of organic farming in France over the last 12 years (data Agence BIO, 2006)

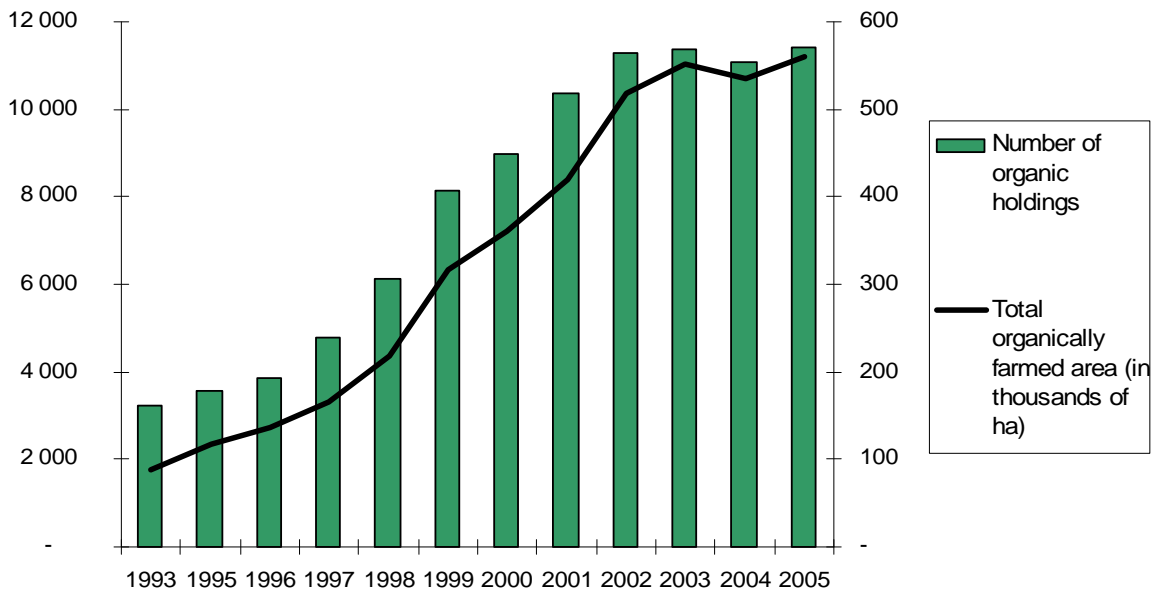
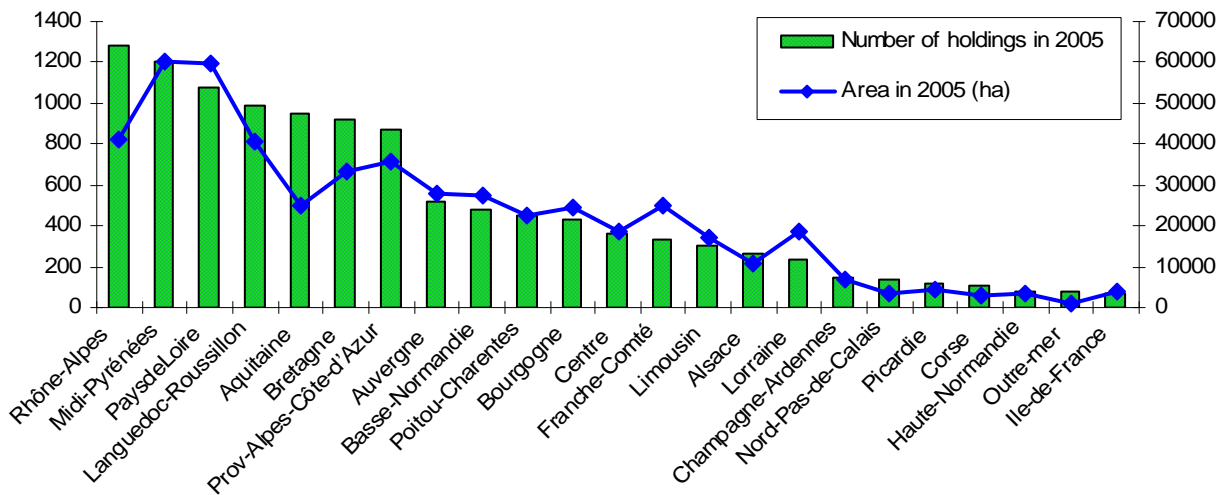


Fig 11. Organic farming in 2005 in France: an uneven distribution of organic farmland and of organic farms number by region (data Agence BIO, 2006)



III. Expansion curbed in spite of recent years inroads

In Europe, organic farming's positioning varies according to country and produce type. Some organic produce markets are close to maturity and grow less fast while others, more recent, experience significant growth ranging from 5 to 10% a year in recent years (tables 1 and 5). But this growth varies depending on foodstuffs and place of abode (post code) as well as according to social strata (Padel, Midmore, 2005).

Tabl. 5 Countries clustered by stage of organic market development (Padel, Midmore, 2005)

Mature market countries	Growth market countries	Emergent market countries
Austria Denmark Germany Switzerland UK	Finland France Italy Netherlands Norway Portugal Sweden	Belgium Czech Republic Greece Ireland Slovenia Spain

What are the prospects of organic farming over the next few years and in post 2013 Europe? At first glance, this type of farming has a great future: demand is on the increase, it has a positive image both in terms of health and the environment, it meets a number of Green concerns, the organic quality premium may help make up for low agricultural prices leading to farm concentration and so on. As a result, for a fraction of the population it is seen as the one and only solution to replace the much criticised industrial and productivist approach to farming, the more so since it enjoys a very positive image in the media and with many consumers

However European organic farming's prospect could be more restricted than it would appear at first. In the short or indeed mid term, say over the next few years, its market should continue to grow at least in a number of European countries. But alongside the plus factors there are also some major question marks on its development. Among those, it is possible to identify (a) limits to its market growth, (b) the strong competition between producers on a world scale, (c) the relative inequality between different countries' subsidies, (d) its relatively greater demands in land and manpower, (e) the existence of inherent risks, and (f) even the increasing share taken by mainstream distribution in this sector. These various inhibitors could limit in the mid and especially the long term the growth of organic farming in Europe. Let us review them in order to define and to analyse them more thoroughly.

3.1. Limits to its market growth.

The organic products market is growing but is liable to remain fairly circumscribed, remaining at a small share of the market as consumers will almost certainly have to re-examine their consumption

choices. For the rise in some household expenditures could bring down to some extent the money available for food shopping, particularly its organic constituent. In fact the rise in rent and energy costs, could be as instrumental as consumers' personal choices in the continuation of the downward trend of the food share in budgets, in particular if a significant proportion of consumers chooses to uphold some of their leisure expenditures (electronic goods, holidays etc...) Set this in a context in which international competition and financial markets pressures are liable to impact negatively on pay rises and you might find a large section of consumers opting for cheaper, easy to prepare foodstuffs, at least for everyday life, and buying organic products only occasionally (Sylvander, François, 2006). For all that a small reduction in meat (or other) consumption makes the choice of organic products accessible, it does not follow that the final decision will frequently favour them. INSEE recent publications on household expenditures show that the budget proportion allocated to food continues to fall whilst the relative share of rents, electronic goods or services, telecommunications, and leisure rises (INSEE, 2006). Whereas a fraction of the population may choose to spend more on food seen as offering better guarantees of quality and authenticity, this conduct may remain that of a largish minority as the popularity of hard discount may suggest.

Coincidentally a survey carried out in September 2006 in France on a sample of 1000 persons shows that an organic pedigree is not the quality criterion nor even the environmental one most rated by the consumers (table 6), other factors come higher in the choice process.

Tabl. 6. Consumer food purchasing criteria Survey TNS - SOFRES September 2006 (in % of surveyed persons, several answers accepted).

a/ factors which rate highest with consumers when they buy foodstuff. "As a rule, which, among the following data, are those you pay most attention to when buying food?"

Use by date	72
Price	57
Composition	48
The guarantee of a seal of approval	44
Origin	31
Brand	27
Organic source/ natural product	23
Recommendation	9
Novelty	9
Packaging	8

b/ Products French people are willing to pay a little more for. "I would buy it, even though it is a little more expensive".

Environmentally friendly product	54
French farmed product	53
Fair trade product	39
GMO free product	37
Brand product	34
Organically grown product	33
Low fat product	16

3.2. The producers' position.

For a fraction of producers' there is a direct interest in adopting organic farming. The reasons vary vastly: health issues or discomfort at the use of some pesticides, sometimes animal health problems, environmental motivations but also opportunistic environmental vocations awakened by the subsidies the sector benefits from and the higher retail price of its products (Barrès et al., 1985). However this type of farming is difficult to implement and demanding. The very scanty statistics available on the subject reveal a rather important turnover in some countries with in-conversion to organic farming but also abandonments and reversing to traditional farming (Eurostat, 2005, p.5). One of the notable advantages of this type of farming is its respect of good agronomic practice, crop rotation, mixed (arable-pastoral) farming, keeping up the rate of organic matter etc... But some of these rules may prove somewhat rigid and hard to keep in the face of surrounds and time constraints as may happen for composting and weeding. Furthermore, even though organic farming outwardly enjoys today an almost universal recognition, opposition to this approach is still alive in the agricultural and related spheres and can impact, sometimes significantly in the field or when it comes to institutional support.

Although organic products are sold with a quality premium intended to make up for lower yields, its amount varies markedly and can drop distinctly in the event of a large organic production or within some distribution networks (CE, 2005). Now the very increase in organically farmed areas observed everywhere in the world could lead to a drop in the premium. It may even not materialise at all in the absence of a specific network in a zone as can be the case for milk collection. Finally many farmers think that the strong competition existing on this market is distorted by the inequality in subsidies between countries (even within the EU) and the impact of the growing globalisation of food supplies

Within the EU organic farming subsidies vary according to country, for instance, some only offer subsidies for in-conversion, that is for a few years, whereas others also have a grant for the upkeep of organic farming. This causes inconsistencies in the competition, as do the variations in tolerated animal densities for instance. Meanwhile globalisation of food supplies has also developed in this sector, even if some consumers are a little more mindful of eating more seasonal locally or regionally produced food. Organic farming is generally more labour intensive, in particular for weeding. This is an opening for low waged or developing economies but conversely subjects Western producers to a steep competition. It should be noted that a number of developing countries have looked into the possibility to export certified organic foodstuffs towards Europe. Should this happen the competition between these supplying countries would be intensified, the more so if oil prices (needed for transportation) rose.

The organic premium may appear a means to combat the low price of farm produce while at the same time promoting agroecosystems assets. This premium can however be narrowed if some distribution channels grow and if a great number of farmers opt for this approach, particularly when organic farming development programs exist in the country or the region. So that the exercise may not prove as profitable as expected for all those adopting organic farming.

3.3. A greater need for land.

Another significant limitation to this type of farming must be the larger area needed to grow one ton of produce as yields tend to be lower, which in turn causes a slightly greater need for land on a global scale in order to ensure the supply of a given number of people. Given the input-output ratio of the plant to animal conversion, this could be offset by lower meat consumption patterns. However, this is not the norm among consumers able to afford meat, the consumption of which happens to be rising in all emergent countries. For their part, farmers can make a living on a smaller organically farmed area if they handle the transformation and sale of their produce, but these activities are not always manageable. Indeed, in many European countries, organic farmers have larger farms than conventional farmers as a whole, contrary to the often claimed idea that organic agriculture makes possible the preservation of family farms (In fact, it depends on the number of people working on the holding and the type of workforce needed). But for society, especially at global level, if the food consumption model remains almost unchanged, the need for extra land could prove a serious hindrance to organic agriculture growth. For the competition for land is likely to be exacerbated in the future under the pressures of population growth, biofuel and bioplastics production, climate change, etc., particularly in some regions.

3.4. Expansion in supermarket distribution.

When it comes to the marketing of organic products, supermarket distribution is likely to play a more important role. Not so long ago, its importance varied depending on countries: in some (Denmark, UK, Argentina) it handled the sale of most of the organic produce, but elsewhere the selling formulae were more diversified with a segment of organic produce sold through specialist shops or directly (RAFI-USA, 2003; FiBI-SIPPO, 2004; CE, 2005).

Nowadays the supermarket sector, e.g. Wal-Mart in the USA, is more and more interested in this growing market, which can offer it an attractive niche for horizontal differentiation. This is certainly a growth opportunity for organic farming for it should enable it to reach more consumers. But at the same time it presents the risk of depriving that farming approach of its specificity, nay of its soul. More significantly, it could present the producers with more standards and specifications imposed downstream and by trading groups, and exacerbate competition, leading to the exclusion of the smaller producers from this distribution network. This would deprive organic farming from the peasant farming tradition it lays claim to (Guthman, 2004). Given supermarket chains pricing policies, the expansion of supermarket sales could besides drive a relative reduction of the organic quality premium received by the producers. Sure, the latter may make up for this by seeking to increase their farm gate sales, the same that will have to compete with an expanding large food store market. There does exist a fraction of consumers interested in direct contact with the producers, which seeks it through a range of supply formulae, from direct purchasing from the farm, or indeed the market, down to AMAP¹⁰ but they are few and are likely to remain so.

¹⁰ Associations pour le Maintien d'une Agriculture Paysanne c.f. Community Supported Agriculture (CSA) also broadly similar initiative to CFLT (Community Farm Land Trusts)

3.5. Contradictions and conflicts.

Finally, in spite (or because) of its “natural hence better for health” aura, organic farming leaves itself open to potential health hazards as caused for instance by the presence of pathogenic bacteria in an insufficiently fermented compost or mycotoxins such as patulin in apples (DGAL, 2001) though controls reduce the risk of such eventuality in the food chain. Its rejection of synthetic chemicals evolved in the second part of the 20th Century makes it resort to older products (copper sulphate) or natural extracts (rotenone), which are not risk-free. Furthermore the agreed rules may prove difficult to implement under certain circumstances or given contexts, hence the occasional discrepancy between rules and praxis, between media image and hard facts (Bonny, Le Pape, 1984). Neither are aids to the in-conversion and upkeep of organic farming identical from a country to the next, hence a degree of heterogeneity in requirements and subsidies liable to result in unfair competition. For all its claims to a natural image in harmony with the environment, organic farming finds the translation of its theories into concrete action diversely enacted, resulting in conflicts between its diverse tendencies. This is currently the case at EU level as the new proposal for the regulation of organic farming issued by the Commission in December 2005 has been found much too lenient by a number of associations concerned, causing fierce protests.

Conclusion

The CAP, for the present and the future, aims to take consumers and taxpayers into consideration and to encourage farmers to produce as required by the market. It wishes to take into account the environment, public health and animal welfare. At a glance, organic farming meets those requirements. Viz the Council's December 2005 proposal for a Council regulation on organic production and labelling of organic products:

" Organic production is an overall system of farm management and food production that combines best environmental practices, a high level of biodiversity, preservation of natural resources, application of high animal welfare standards and production in line with the preference of certain consumers for products produced using natural substances and processes. The organic production method thus plays a dual societal role, where it on the one hand provides for a specific market responding to a consumer demand for organic products, and on the other hand delivers public goods contributing to the protection of the environment and animal welfare, as well as to rural development. "

Thus organic farming now stands as an exemplar or quasi exemplar for a number of actors: The EC, many consumer media, leading figures, a section of consumers, environmental and altermondialist associations one farming trade union, and so on. This would seem to bode well for the future. But this outward success should not blind anybody to the presence of considerable inhibitors to a large-scale development

On the one hand, in the immediate future and in the long term, the context of agricultural surplus (and indirectly of arable land surplus) which has dominated the debate for the last three decades

could change as a result of the use of biomass for energy purposes or in vegetable chemistry, or following the fallouts of climate change and the growth in food demand in emergent countries. Now organic farming normally needs a greater area in order to produce a given quantity of goods. Meanwhile, divergence within the movement between those who want their farming “organic and nothing but” and those seeking formulae easier to implement are likely to delay the adoption of policies suited to a better harmonization between countries.

On the other hand a section of the health-fitness-and-well-being orientated consumers could opt for functional foods rather than organic products, or make other consumption choices, particularly in the younger generations. Furthermore, in the face of major public health issues such as the obesity trend and the range of illness it may generate, organic products are only an adequate response when they are cooked or processed without excess fat, quick-sugar or salt, which is not always the case. So the organic farming market may increase in absolute value but its relative level will probably remain low, bearing in mind that its sales were worth less than 1% of the world food market in 2005. Even if they doubled their share would remain modest.

The issues raised by organic farming cannot be addressed outside the broader set of problems implicating farming as a whole. For **it is farming as a whole which must aim at a greater harmony with the environment;** it is hardly conceivable to have on the one hand a clean, pure, healthy sector and on the other, a polluting standard farming based on products and practices rather damaging to the environment. That is the crucial issue: the whole farming industry must aim at a more ecological praxis.

One way to ensure a more sustainable farming in greater harmony with the environment is to make the best of scientific and technical progress wedded to local or empirical know how. Intrinsically, scientific and technical progress is often no more than gaining information, extra knowledge, data on the nature of living things, ecosystems, production processes etc. Thus, it can procure numerous tools to figure out the use of inputs with a finer adjustment of their application in relation to the needs of crops and livestock. This adjustment may address the quantity needed, the composition and contents, the time and pinpointing of input. It may help reduce much waste, use less inputs and energy by product unit, and diminish pollutions. This is made possible by a more precise knowledge of the requirements of plants and animals at different stages of their development and thanks to the recourse to diagnosis tools or sensors to estimate crops needs in water, nitrogen, or even the risk of diseases. In crop production, fertiliser and insecticides dosage can be adjusted more precisely to plant needs and disease threats, hence the possibility to reduce the treatments and leakage of some elements. To which must be added the access to a range of methods to apply inputs much more precisely where they are needed. Cattle feed too can see their protein and phosphorus nutrients adjusted to the needs of animals at diverse stages, thus reducing rejections. All in all technical progress can thus help fine-tune needed interventions.

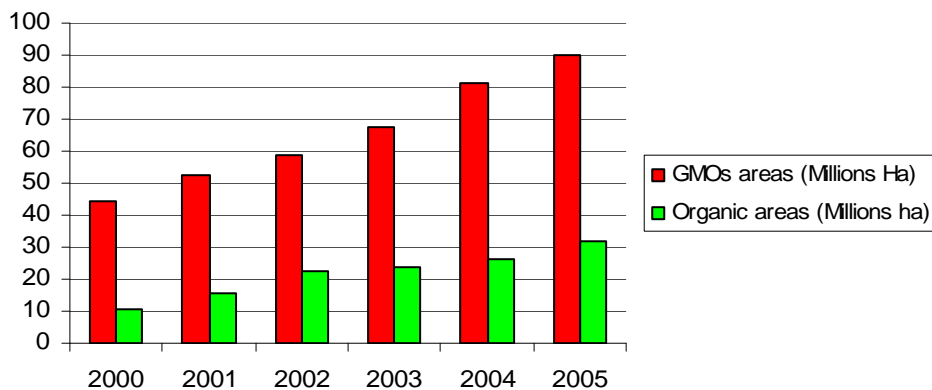
At the same time, the knowledge and appreciation of living processes (in the broader sense) may help limit the use of chemicals through a better appreciation and use of biological mechanisms and agroecosystem self-regulations. Scientific and technical knowledge can be a way to work better with nature rather than against her (even if it is also necessary to take steps against natural hazards such as natural toxic substances and natural disasters). They are the key to help a much better or more extensive use of biological control and integrated pest management, plant combination, genetic

resources, varied interactions... Thus technical progress must be scrutinised before being uncritically rejected or embraced, and associated rather than opposed to local and empirical know how.

This takes us back to the fundamental question: Are modern farming techniques in their essence dangerously polluting? Or is it the way they are put in use? Or more precisely the economic context and relative prices? In-depth analyses going to the heart of the issues at stake are necessary. Technological advances would appear apt to be turned to the service of increased sustainability and the reduction of pollutions. It all hinges on the direction they have taken and the use they are put to. It hinges even more on the way the resulting produce is thereafter allowed to compete on the market, how it is transported, assembled, packaged, advertised, marketed and consumed. And today, the financial and economic factors in particular take precedence. In other words, what needs addressing is the targets set for human endeavour and the way they are regulated, what economy is all about. Much more than the activities of farmers, who will be hard put to elude prevailing economic pressures – it is this broad governance of humankind’s relationship with Planet Earth which is at stake, the more so since it impacts on all activities.

Areas organically and transgenically farmed in the world

The organic movement opposed the use of GMOs, which is of a piece with the options it has chosen. Yet the option to resort to biological solutions could have resulted in a broader range of choices. For biotechnologies are tantamount to a use and a better valorisation of living processes and to a replacement of chemical techniques by the application of biological processes, barring the special case of transition of herbicide tolerant plants. It will be noted that, contrary to received wisdom, in 2005 areas dedicated to transgenic crops were vastly superior to those allocated for organic farming (fig. 12).



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