THE DEMAND FOR ORGANIC FRUIT AND VEGETABLE PRODUCTS IN EU COUNTRIES: A SURVEY OF THE EXPECTATIONS OF MARKET AGENTS

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ABSTRACT

This study investigates the reasons for the relatively modest increase in the consumption of organic products in recent years. A survey has been carried out to explore the role of marketing issues in the consumption of organic fruit and vegetables in various EU countries. The results indicate that the demand for organic products is likely to remain small unless there will be a significant change in the marketing strategy of these products. Specifically, the results of our survey indicate that their consumption is unlikely to increase much unless prices for organic fruit and vegetables are reduced significantly and an effort is made to increase consumers' understanding of organic products and their certification. In addition, an improvement in the regularity of supplies is needed to expand of the role of large retailers in the marketing of these products.

RÉSUMÉ

Cette étude analyse les causes de l'augmentation relativement modeste de la consommation de produits biologiques ces dernières années. Une enquête a été effectuée afin d'explorer les possibilités d'évolution de la consommation de fruits et légumes biologiques dans différents pays de l'UE. Les résultats indiquent que la demande de produits biologiques est susceptible de demeurer faible à moins qu'il n'y ait un changement significatif dans leur stratégie de commercialisation. Notamment, les résultats de l'enquête montrent que la consommation d'aliments biologiques est fortement liée et donc dépendante de leurs prix de marché. Un effort devrait aussi être entrepris pour améliorer la connaissance des consommateurs des produits biologiques et leurs méthodes d'homologation. En outre, une amélioration de la régularité des approvisionnements est nécessaire pour le développement du rôle de la grande distribution dans la commercialisation de ces produits.

1. INTRODUCTION

Recent developments in the demand for food have been characterised by a shift towards higher quality and better food safety standards. This pattern is related both to higher incomes and the increased awareness of the importance of a healthy diet (see, *inter alia*, Bellia, 1987; Senauer, 1990; Connor, 1994; Carrà, 1999). A significant element in this change has been a marked increase in the demand for organic foods, and in particular organically grown fruit and vegetable products, which by 1999 represented about 3% of all fruit and vegetable consumption in the EU (**Table 1**)(1).

These goods embody many of the key characteristics of the new fashion in consumer diet: they are healthier and better tasting, and their quality (shape, colour, perishability) is as good as that of traditionally grown fruit and vegetables (Huang, 1996; Organic Control Italy, 2000).

It appears reasonable to expect a substantial increase in the demand for these products.

However, so far the shift in favour of these goods has been rather modest. An in-depth analysis of the strengths and weaknesses in the marketing of organic fruit and vegetables is needed to identify the most likely future developments in the demand for these products. This paper presents the results of a survey of wholesalers and intermediate consumers which has been carried out to investigate this issue. Jointly with other sources of information, the results of the survey provide information on current bottlenecks and future trends in the marketing of these products in the EU, and suggest possible strategies for improvement.

2. THE SURVEY METHODOLOGY

The survey has been carried out in October 1999 to investigate existing bottlenecks in the marketing of organically grown fruit and vegetable products. Due to financial constraints the sample size has been limited to 63 individuals, of which 23 in Italy, 15 in the UK, 14 in Germany and 11 in France (**Table 2**).

The individuals have been selected on the basis of the involvement in the organic fruit and vegetables industry. The people interviewed include 'the buyers' of the main distribution platforms, both in Italy (such as Es-

Table 1 ***The structure of demand for fruit and vegetable products in Italy.***

Production type	%
Traditionally grown	57.2
IPM grown	40.0
Organic grown	2.8

Source: Organic Control Italy (2000).

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(1) In this study we refer to: i) 'traditional' fruit and vegetables, which are grown following standard agro-chemical practices (i.e. use of chemical sprays at regular intervals); ii) 'Integrated Pest Management' (IPM) fruit and vegetables, which are grown using only essential amounts of fertiliser and pesticides (in accordance to IPM cultivation techniques spelled out in EU Reg. 2078/92); and iii) 'organic' fruit and vegetables, which are grown making no use of dangerous fertilisers and pesticides (also spelled out in EU Reg. 2078/92).

Table 2 ***Structure of the sample by category and nationality.***

Type of firm by country		UK	France	Germany	Italy	TOTAL	
						No.	(%)
Producers' associations, Cooperatives		1	5	2	7	15	(23.8)
Wholesalers, import-export firms		13	4	12	7	36	(57.2)
Large retailers, franchising		1	2	–	9	12	(19.0)
TOTAL	No.	15	11	14	23	63	
	(%)	(23.8)	(17.5)	(22.2)	(36.5)		(100)

Source: Authors' survey.

selunga, Pam, Coop, Standa, Crai and Conad) and in the EU (such as Auchan, Marks and Spencer, Asda), as well as the main producers' organizations (such as Prince De Bretagne), the main pioneers of organic production (such as the French Bioprim and the Italian Brio), important trading companies (such as Gruppo Coferata, Apofruit, Il Consorzio Conepro), and agents of the major fruit and vegetables import-export firms and service providers for the large retailers.

Specifically, 57% of the sample is constituted of import-export or wholesalers, 24% is a member of a producers' organisation or a cooperative and the remaining 19% belongs to the large distribution and retail networks/firms (Table 2)(2).

The limited financial resources available and the highly heterogeneous nature of the distribution channels for fruit and vegetable products, have dictated the choice to focus on a qualitative investigation. In fact, the sample size required to carry out a significant quantitative analysis would have been substantially larger. It has been chosen instead to focus on the response of a small sample of 'privileged' agents who are close to the evolution and the problems of the sector.

The questionnaire is composed of 17 questions investigating the availability of supplies throughout the year, the (perceived) importance of quality certification and brands, the importance and recent trends in packaging, the existing problems in the marketing of the products, the price wedge between traditional and organic products, and the expectations for future developments.

3. The results of the surveys

The results of the survey provide a reasonably defined picture of recent developments and future expectations in the demand for these products.

More important, the results highlight existing marketing problems, and investigate the role of current pricing strategies and the role of quality standards and certification.

3.1. Recent evolution of the demand for organic fruit and vegetable products

The demand for organic fruit and vegetable products has been increasing in recent years. Most agents believe that while the demand for traditional fruit and vegetables has remained constant over the last few years, the demand for IPM (Integrated Pest Management) fruit and vegetables and especially the demand for organic products have been increasing (**Table 3**).

The increase in demand is also reflected in the rise in the number of firms which trade organic products. Most of the firms interviewed have been dealing with traditionally grown fruit and vegetable products for over 5 years (94%). Similarly, most firms have been marketing IPM products for over 5 years (89%). In the case of organic fruit and vegetables, however, as many as 32% of the firms began marketing these products as late as 1999, and only 18% of the firms have been dealing with them for more than 5 years (**Table 4**).

However, in spite of recent increases, the demand for these products remains small (see Table 1 above). Respondents estimate that at present the relative importance of organic products in total fruit and vegetable sales is between 1% and 5% in Italy and France and the UK, and somewhat higher in Germany (reaching 20% in

Table 3 ***Recent trends in the demand for traditional, IPM and organic fruit and vegetables.***

Agents' opinion	Traditional (% of 52 firms)	IPM (% of 45 firms)	Organic (% of 34 firms)
Increasing	9.6	55.6	70.6
Stable	86.5	44.4	29.4
Decreasing	3.8	–	–

Source: Authors' survey.

Table 4 ***Years of experience in the marketing of fruit and vegetable products.***

Years of experience	Traditional (% of 52 firms)	IPM (% of 45 firms)	Organic (% of 34 firms)
1 years	1.9	4.4	32.3
2-3 years	–	–	29.4
4-5 years	3.8	6.7	20.6
Over 5 years	94.3	88.9	17.6

Source: Authors' survey.

(2) The terms "agent" and "firm" will be used interchangeably in the tables throughout the study to refer to the individuals interviewed and the firms they represent.

some instances). This compares with a level of 1%-2% in 1991 (Sylvander and Melet, 1992).
In fact, it appears that most firms have been introducing organic products for "strategic reasons" rather than to satisfy a demand for these products. In most cases image reasons appear to drive the decision to deal with organic products. Also, the decision to ensure the availability of these products is made not to lose customers to the competition, rather than for any significance attached to the sales/demand for these products in the next few years.

3.2. Growth expectations in the demand for fruit and vegetable products

Almost all agents are optimistic about long-term market developments for organic products (95%). Of these, about 45% expects a rapid increase in the demand for these products over the next five years. As many as 50% expect only a moderate increase. Only 3% expects the demand for these products to remain stable (not shown).
In the short term, however, it is interesting to note that while about 56% of the agents interviewed expect an increase in demand for organic products over the next 2 years, a large number expect instead the demand for IPM products to grow (51%) and that for organic products to remain relatively stable (38%) (**Table 5**).
In sum, the demand for organic fruit and vegetable products has increased in recent years, but remains small in relation to total consumption of fruit and vegetable products. Although the consumption of these products is expected to grow, it is unlikely to substitute for traditional fruit and vegetables over the next few years. In the short to medium term, the demand for healthier and safer fruit and vegetable products is likely to be satisfied by IPM products. The latter already constitute a large proportion of fruit and vegetables consumption and their consumption is expected to increase significantly in the next few years.

3.3. Main characteristics of the demand for organic fruit and vegetable products

An investigation in the problems that hinder the growth in consumption of organic fruit and vegetable products requires a good understanding of the basic characteristics of the demand for these products. In the survey, several questions have been asked to identify the type of retail outlets used, the frequency of purchases, the use of brands and the extent of the price mark-up for organic products.
Organic fruit and vegetable products are marketed mainly via specialised outlets and franchising stores which account for over 60% of organic fruit and vegetable sales. Until recently these products were available only in few large food retailers, although as was discussed above the interest of large retailers appears to have increased in recent years and currently accounts for about 40% of organic fruit and vegetable sales (Organic Control Italy, 2000).
Most of the customers are regular purchasers of organic products. Over a third buys organic fruit and vegetables on a weekly basis (36%), and a further 20% buys organic at least once a fortnight (Organic Control Italy, 2000).
Brands play a very important role in organic foods. In Italy, the number of farms which have adopted certification has increased tenfold over the last seven years, from about 500 in 1993 to about 5000 in 2000. This increase has been mostly concentrated in the last three years (Organic Control Italy, 2000). As a result, most of the marketed organic fruit and vegetables now comes with a brand and/or certification, which is not the case of traditional products (**Table 6**).
Prices of organic fruit and vegetables present a mark-up of up to 80% with respect to traditional products, and up to 50% with respect to IPM products. It is important to underline that the price gap between traditional and IPM products is much smaller at only about 10% on average (**Table 7**).
The high level of prices is due in part to the higher costs associated with organic production, and also to the high

Table 5 ***Expected growth in the demand for traditional, IPM and organic fruit and vegetable products over the next 2 years.***

Agents' opinion	Traditional and IPM (% of 61 firms)	Organic (% of 34 firms)
Increase	50.8	55.9
Stable	42.6	38.2
Decrease	6.6	5.9

Source: Authors' survey.

Table 6 ***Percentage of brands (of origin, of producer, of quality) in marketed fruit and vegetable products in the EU.***

Type of branding	Traditional (% of 52 firms)	IPM (% of 45 firms)	Organic (% of 34 firms)
With brand	28.8	35.6	47.0
Only in part	38.5	40.0	32.4
No brand	32.7	24.4	20.6

Source: Authors' survey.

Table 7 ***Price mark-ups between different types of fruit and vegetables.***

Products compared	Price mark-up (% range)
Traditional Vs IPM	5-15
Traditional Vs Organic	40-80
IPM Vs Organic	20-50

Source: Authors' survey.

distribution costs associated with relatively small quantities. Also, the high quality packaging normally used contributes to explain the higher prices charged. The cardboard box type of package is the most requested (52%), followed by wood boxes (20%) and other less common types of packaging (28%). In addition, however, the high price mark-up also reflects the choice to market these products as luxury high-quality products.
In sum, organic foods still represent a niche market for relatively few regular customers. The marketing strategy of these products emphasises the high quality, as reflected by the type of packaging used, the wide use of brands and certification, and the role of specialised outlets. The large mark-up is also typical of a niche markets for high-quality or luxury products.

Table 8 ***Main problems in the marketing of organic fruit and vegetables.***

Type of problem	Producer associations, cooperatives (% of 15)	Wholesalers, import-export firms (% of 36)	Large retailers, franchising (% of 12)	Consumers (1) (% of 166)
Price related problems	6.7	8.3	8.3	47.6
Brand related problems	6.7	8.3	8.3	6.0(2)
Homogeneity of fruits and vegetables	13.3	16.7	25.0	12.9
Ripeness of the product	26.6	27.7	25.0	7.5
Lack of regular supplies	33.3	30.6	25.0	26.0
Reliability of suppliers	13.3	8.3	8.3	n.a.

Source: Authors' survey.
Notes: (1) Data on the basis of a survey conducted by Organic Control Italy, 2000
(2)Refers to answer "These products are not on fashion".

3.4. Main obstacles to the increase in the consumption of these products

The results presented in the previous sections indicate that the marketing profile of organic fruit and vegetable products is designed for a small specialised market of high quality products. However, it is not clear what prevents a significant increase in the consumption of these products.
Several questions have been asked to identify current problems in the marketing of organic fruit and vegetables and obstacles to an increase in their consumption. As far as producers, wholesalers and retailers are concerned, the main problems appear to be related to the variability in the quality of the products (ripeness and homogeneity) and to the lack of regular supplies (**Table 8**). However, it should be noted that the quality of supplies has been increasing significantly in recent years, and it is unlikely to remain a key issue for much longer (Organic Control Italy, 2000).
The agents interviewed were also asked about the most frequent complaints expressed by consumers. Interestingly, from the consumers point of view the main problem is the high price for these products. Irregular supplies and poor quality are also important (Table 8). On the other hand, for producers, wholesalers and retailers the main marketing difficulty appears to be the irregularity of supplies (Table 8).
The difference between consumers and retailers highlights a different understanding of the major obstacles to the growth in demand. As far as consumers are concerned, the main problem is clearly the high level of prices. On the other hand, almost half of producers, wholesalers and retailers believe the main factor preventing an increase in demand to be better consumer information about the nature of organic products and the inadequate awareness of what justifies the higher prices (**Table 9**). High prices are perceived to be central by about 24% of respondents.
Finally, irregular supply (both in quality and in the available varieties) is identified as the main problem to the growth in consumption of these products by about 21% (Table 9).

4. IMPLICATIONS OF THE RESULTS AND POLICY RECOMMENDATIONS

The analysis above has suggested that the current price mark-up is appropriate for niche high quality products. These types of markets are characterised by high profits, but limited growth (Austin, 1992; Brown, 1994; Porter, 1998). Prices will have to be reduced for organic products to become widely consumed. According to the market agents interviewed a much smaller mark-up of up to 30% would be justified to reflect the higher costs incurred (**Table 10**).
As was discussed above, the people interviewed suggested that in addition to reducing prices it is necessary to better inform the consumers. Specific issues to be advertised include organic foods' lack of use of chemicals and the positive impact on the environment. The refusal

Table 9 ***How to increase the demand of organic products.***

Type of problem preventing demand growth	(% of 63 firms)
Improve consumers' information	49.2
Reduce prices	23.8
Expand available varieties	11.1
Improve quality	9.5
Improve service and conservation	6.3

Source: Authors' survey.

of genetically modified (GM) products is also perceived as an important factor to be advertised (**Table 11**).

In this respect, the importance of brands and certification to ensure quality and to facilitate customer recognition has been emphasised in the literature (Nijssen and Van Trijp, 1993; Huang, *op.cit.*) and is explicitly confirmed by almost 70% of the agents interviewed. This is particularly true for large retailers and franchising chains, where over 90% consider branding important or very important (**Table 12**).

Table 12 ***Importance of brands in marketing strategy of organic fruit and vegetable products.***

Agents' opinion	Producer associations, cooperatives (% of 15)	Wholesalers, import-export firms (% of 36)	Large retailers, franchising (% of 12)	TOTAL (% of 166)
Very important	20.0	25.0	33.3	25.4
Quite important	20.0	44.4	58.3	41.3
Not very important	26.7	8.3	-	11.1
Not important	26.7	19.4	8.3	19.0
Indifferent	6.7	2.8	-	3.2

Source: Authors' survey.

5. Conclusions

The results of the survey indicate that the demand for organic fruit and vegetable products is likely to remain relatively small for quite some time. The expansion in the marketing of organic fruit and vegetable products has been significant in recent years both in terms of quantity demanded and in terms of the number of firms. A further increase in consumption is expected over the next 5 years. However, even accounting for future increases, sales of organic products are expected to remain modest in relation to overall sales of fruit and vegetables.

The reasons for this performance can be mainly attributed to two factors. Firstly, the marketing strategy for these products has been designed for a high quality small niche market, with high prices and specialised outlets. Secondly, the lack of adequate information about the differences between IPM and organic products and the much more affordable prices for IPM products, has contributed to select the latter as the mass substitute for traditional high-chemical-residues productions.

This trend is unlikely to change unless prices for organic fruit and vegetables are reduced significantly and an effort is made to increase consumers' understanding of organic products and their certification. In addition, an improvement in the regularity of supplies would facilitate the expansion of the role of large retailers in marketing these products. ●

Table 10 ***Fair level of price mark-up between traditional and organic products (opinion of interviewed people).***

Price mark-up	(% of 63 firms)
Up to 10%	33.3
Up to 30%	54.0
Up to 50%	11.1
Over 50%	1.6

Source: Authors' survey.

Table 11 ***Main issues to emphasise in promotional campaigns.***

Issues to advertise about organic products	(% of 63 firms)
Do not make any use of chemicals	47.6
Contribute to environmental protection	23.8
Easier to digest	1.6
Better nutritional values	6.4
Do not contain GM foods	20.6

Source: Authors' survey.

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