The possibilities of organic food market's development in the Czech Republic

Možnosti rozvoje trhu s biopotravinami v České republice

I. Živělová, J. Jánský

Mendel University of Agriculture and Forestry, Brno, Czech Republic

Abstract: The consumption of the organic food in the Czech Republic is, in spite of its permanent growth, still on a very low level. The reasons are both on the side of supply and demand of organic food. The reasons on the side of the supply are especially the insufficient amount and the structure of the organic products. Demand is not met especially in the case of the livestock products, further also in the fruits, vegetables, bread, pastry and others. The lack of the organic food is solved by imports. The important factor is also the lack of the processing capacities, especially for meat and dairy products. The sale is provided under the way of short-term contracts. The prices that the organic farmers get for their products fall short of the quality of products. The main distribution channels are the supermarkets. The organic products are here, however, only the marginal products. For the increase of the supply, the advertising and advertisement should be intensified. The demand is obstructed especially by the low consumer awareness, while the consumers are not sufficiently familiar with the quality of the organic products and are not willing to pay higher price for the higher quality of foodstuff.

Key words: organic agriculture, organic market, consumption of organic food, supply for organic food, demand for organic food

Abstrakt: Spotřeba biopotravin v České republice je, i přes svůj trvalý růst, stále na velmi nízké úrovni. Důvody je třeba hledat jak na straně nabídky, tak poptávky po biopotravinách. Na straně nabídky je to zejména nedostatečné množství a struktura bioproduktů. Poptávka není uspokojena zejména u živočišných produktů, chybí však i ovoce, zelenina, chléb, pečivo a další. Nedostatek biopotravin je řešen pomocí dovozů. Významným faktorem jsou i nedostatečné zpracovatelské kapacity, především u masa a mléčných výrobků. Odbyt je zajišťován především cestou krátkodobých smluv. Ceny, které ekologičtí zemědělci za své produkty získávají neodpovídají kvalitě produktů. Hlavní distribuční cestou se stává prodej prostřednictvím supermarketů, v nichž jsou však biopotraviny považovány pouze za doplňkové zboží. Pro rozšíření nabídky by bylo třeba zintenzívnit propagaci a reklamu biopotravin. Na straně poptávky omezuje rozvoj trhu s biopotravinami zejména nízká informovanost spotřebitelů, kteří nejsou adekvátně seznamování s kvalitou biopotravin a nejsou ochotni za uspokojení poptávky po kvalitních potravinách zaplatit vyšší cenu.

Klíčová slova: ekologické zemědělství, trh biopotravin, spotřeba biopotravin, nabídka biopotravin, poptávka po biopotravinách

The consumers' interest for organic food is till increasing both in the Czech Republic and abroad. Even if the demand is increasing, the ratio of organic food in the total foodstuff consumption remains small. The organic food represents less than 1% of the total consumption of foodstuff in the Czech Republic, while the average consumption in the EU countries is about 2%, in some countries even 5% (Živělová 2004).

The organic food is made from organic products, i.e. the products of controlled organic agriculture that is the up-to-date way of agriculture with the positive attitude to the soil, plants, animals and nature without using the industrial fertilizers, pesticides, hormones and other chemical preparations. The quality of organic food is characterized in more of ways than only by the evaluation of the mechanical,

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chemical or microbiological content. It represents also the approach regardful of environment, easy on the animal breeding and also regardful of the non-renewable resources of the energy and raw materials. The consumers are not always alive to all aspects mentioned above concerning the organic food. Their decision-making about the purchase of organic food is involved by a lot of additional factors.

The value of the organic food market is not still large enough in the Czech Republic, but there are some possibilities of further enlargement. The supply of organic food on the Czech market with respect to the developed countries is not sufficient and also its structure is not favourable.

GOALS AND METHODOLOGY

The paper has arisen within the research project of the FBE MUAF Brno, MSM 6215648904 "Czech economy in the process of integration and globalization and the development of agrarian sector and sector of services in new conditions of the European integrated market" of the thematic direction 04 "The trends of agro-business, formation of the segmented markets within the commodities' chains and the food nets in the process of integration and globalization and the changes of the agrarian policy".

The aim of the paper is the analysis of the chosen aspects of the demand for and supply of organic food in the Czech Republic.

The supply analysis is focused on the organic market trends, the supply structure, the prices of organic products and the most common distribution channels. For the purpose of a closer knowledge of the sale methods and of the guarantee of sales, the investigation about the guarantee of sales was performed among the informants of the selected sample of organic farmers. The opinions of the keepers of the shops of organic products of the possibilities of further sales enlargement were found by the interviews.

The demand for organic food is focused on the consumers´ behaviour during their decision-making about the purchase of the organic food. The consumers´ opinions were investigated by the structured questionnaire on the different places of the Czech Republic in the cities of different sizes.

Table 1. The amount of the organic vegetable production during the period 2002–2004

Product	Amount (t)		
	2002	2003	2004[1]
Wheat	5 169.10	2 294.40	10 287.53
Spelt	3 674.90	3 010.48	
Barley	2 537.90	1 843.70	2 387.20
Rye	1 415.10	1 303.60	5 761.50 [2]
Oat	5 369.30	2 307.70	
Triticale	1 785.00	125.40	– [3]
Corn	–	–	716.10
Buckwheat	1 068.00	935.60	1 081.99 [4]
Peas	1 603.30	517.30	
Potatoes	1 369.80	765.50	2 019.10
Vegetable	6 517.10	5 376.06	3 659.06
Fruit	2 311.96	1 644.10	824.18

Source: www.mze.cz

[1] In 2004 the common wheat is stated

[2] In 2004 the amount of both crop-plant together

[3] In 2004 no amount stated

[4] In 2004 the amount of dried husked pulses is stated

RESULTS AND DISCUSSION

The chosen aspects of the supply of organic food

The supply of organic food and especially its structure falls short of dynamic development of the area of organically farmed land and the number of the organic farmers. It is mainly caused by the production structure of the organic farms that are mainly focused on the permanent pastures and the associated beef breeding. In 2004 the permanent pastures covered 89.4% of the organically farmed agriculture land. The supply of organic products is in spite of that very low, it does not fill the increasing demand and is insufficient especially in its structure. Some products are utterly missing. The demand is not satisfied especially for eggs, milk and dairy products, pork and chicken, fruit and vegetables, the surplus is in beef. The total amount of the chosen organic products produced in the Czech Republic from 2002 to 2004 is stated in Tables 1 and 2.

Table 1 shows that the amount of organic vegetable products is during the period under consideration increasing in the cases of cereals and potatoes. The growing of fruits and vegetables is in the Czech Republic generally declining what is also the case of organic fruits and vegetables.

According to Table 2, the increase in organic production is in the case of animal products. The increase is significant especially in the case of beef-cattle, what comports with the specialization of Czech organic agriculture and the corresponding permanent pasture management.

As one of the main restriction of the organic market development in the Czech Republic could be regarded the low developed distribution channels and low transparency of the market. For the purpose of closer knowledge of the sale methods and of the guarantee of sales, the investigation about the guarantee of sales was performed among the informants of the selected sample of organic farmers (Jánský 2005).

As the possible distribution channels, the following opportunities were thought:
– direct sale from the farmyard
– direct sale on market place
– the healthy food shops
– supermarkets
– processors
– other

The mentioned distributing channels were detected for the individual commodities mentioned below. The winter wheat and spelt are distributed to further processing. The similar situation is in the case of winter barely, rye, triticale and buckwheat. Part of the informants use partially (10–15%) the direct sale from the farmyard in the case of spelt, barely, oats and triticale.

Another situation is in the case of potatoes, where the direct sale from the farmyard or on market place is mainly used, the use as a fodder in own company also appears. The marrow is sold to further processing. Organic wine is realised by the direct sale to the consumers. Other crops as peas, flax and some variations of herbals are sold to the processors.

There is a different situation in the case of beef-cattle. 65% of the informants sold the meat to the processors, 15% sold directly from the farmyard and 20% combine direct sale and sale to processors. Three informants sold their production for the conventional processing to the slaughter house.

Table 2. The amount of organic animal production during period 2002–2004

Product	Quantity unit	Amount		
		2002	2003	2004
Cow's milk	thousands	16 394	8 301	9 320
Beef-cattle	pcs	8 584	6 169	26 700
Beef-pigs	pcs	2 222	1 630	2 187
Beef-ships	pcs	750	803	2 166
Beef-goat	pcs	78	509	775
Hen-eggs	thousands of pcs	187	78	73

Source: www.mze.cz

Milk is mainly sold to the processors, only a little part through the direct sale. Lamb meat is sold mainly from the farmyard; only 1 informant sold the meat to the processor. The goat milk, respectively dairy products are as well sold mainly directly to the consumer and partially to the specialized shops with healthy food.

From the obtained data, it ensued that no informant asked about the forms of sale sold the production to the supermarket.

Besides the mentioned distribution channels the informants were also asked about the ways of ensuring their sales. The range of choice has been:
– under a long term contract for more than one year
– under a short term contract in the given year
– according to the occasional demand
– other

The mentioned ways of ensuring the sale were again detected for the individual commodities. The sale of winter wheat is ensured by the long term contracts and partially also by short term contracts. The spelt is sold mainly under short term contracts (75%), the rest of informants sold according to the occasional demand. Short term contracts and occasional demand is the main way of sale for winter barely, spelt and oats. The sale of triticale is ensured by the both short term and long term contracts. Buckwheat is sold under the short term contracts, potatoes entirely according to the occasional demand. The long term contracts are on the other hand typical for ensuring the sale of the marrow. The situation of wine is heterogeneous, short term contracts dominate, but there is also mentioned the sale according to the occasional demand.

In the case of animal products, it is also not possible to determine the most convenient way of distribution because the informants did not enlist all the range of choice. In the case of beef-cattle, 60% of informants contract with their subscribers short-term contracts, only 2 informants marked their contracts as long-term, 40% of informants use for the sales of their products meeting of the occasional demand. Only a little part of milk production is realized haphazard, the bulk of sales is ensured by short-term contracts. The lamb meat and goat milk, on the other hand, meet the occasional demand and the processed milk is sold by the occasional demand and under short-term contracts.

The last task that was solved in the questionnaire was whether the organically produced products are sold as organic products or conventional products. All of the organic plant products with the exception of triticale and partially winter wheat are sold as organic products. A worse situation is with the organic animal products. These products are only rarely bought out as organic products, the absolute majority of them are sold as conventional products.

The enlargement of the processing capacities is obstructed mainly by the strict hygienic regulations and norms that require the separate processing of the organic and conventional products. The lower processing amount of the organic products makes the building up of the specialized premises uneconomic and lot of the organic products is at the end processed as conventional. In spite of that, the amount of organic processors is rising. While in 2001 the number of organic processors was 75, in 2004 the number has increased up to 116 and in 2005 the number was 125. The processing capacity is, however, still insufficient.

With the sale problem, there are also connected prices that organic producers get for their products (Jánský, Živělová 2005). Generally it could be supposed that organic products will be sold in respect to their quality for a higher price than the conventional ones. The reality for the single products is, however, different, what could be seen from Table 3.

In the selected sample of the organic farmers, it is possible to part the products according to the comparison with the prices of conventional products into two groups. The first one is the organic products with prices higher than conventional products. This group includes the spelt, rye, potatoes and beef-cattle. These products are mainly realised as certified organic products.

The second group is made by organic products with prices lower than conventional products or similar to them. This group includes oat, winter wheat, triticale and except of 2003 also cow milk. In the case of cereals, this situation could be explained by the fact that these crops are mainly used as feed. Organic milk is mainly sold as conventional milk because of the above mentioned lack of processing capacities.

For the purpose of the examination of the enlargement of sales of organic products, the interview among the sellers of organic products has been carried out. 22 shop representatives have been addressed from different shops – the hypermarkets Intespar, Globus, Carrefour, the supermarkets Billa, Delvita, Albert, Julius Meinl, Penny Market Tesco Stores, shops with healthy food and one specialized shop with organic products.

The supermarkets Albert, Julius Meinl, Penny Market and the hypermarket Hypernova are not engaged in organic products by the reason of their focus on conventional products that are more demanded especially outside large cities.

From the rest of shops, the most experienced in sales of organic products were employees of the healthy food shops in which the organic products are sold already 5–13 years. Also the hypermarket Carrefour offers the organic products for a relatively long time (6 years) and the hypermarket Globus CR (5 years) followed by the Tesco Stores (4 years). Other followed-up shops sell organic products for 2 years.

Table 3. Average exercised prices for the production unit of animal and plant products (CZK)

Product	Average exercised prices of the organic products			Average exercised prices of the conventional products		
	2002	2003	2004	2002	2003	2004
Winter wheat	2 834	4 185	2 786	2 939	3 304	3 096
Spelt	6 693	7 186	7 092	2 939	3 304	3 096
Oat	2 715	3 139	3 573	3 758	3 020	3 258
Rye	4 313	4 158	4 100	3 225	3 466	3 181
Triticale	2 337	4 139	2 544	2 541	2 718	2 546
Potatoes	5 504	5 785	5 208	3 307	3 703	2 978
Buckwheat	8 982	8 896	10 197	–	–	–
Marrow	72 524	72 524	60 018	–	–	–
Cow milk	7.86	7.76	8.50	8.16	7.83	8.08
Beef-cattle	49.97	43.49	42.91	36.28	35.18	37.17

For the end user, the important factor influencing the size of his/her demand is the width of the offered range of products. The widest range have got, besides the specialized shops, the shops with healthy food. Supermarkets are focused mainly on bread and pastry, milk and dairy products, the Delvita offers pork, poultry and bovine meat, fruit, vegetable and potatoes, the Carrefour offers milk and the Globus also e.g. pulses.

In super- and hypermarkets organic products are held only as marginal products that create less than 1% of the total sales. Very low ratios of sales have got the organic products also in the shops with healthy food. Only in the specialized shop with organic products have got the organic products as more than 97% rate of sales, what is logical.

Table 4. The frequency of organic products purchases

Question	Rate of informants (%)	
	2004	2005
The frequency of organic products purchases	100.00	100.00
– regularly	17.24	40.61
– haphazard	82.76	59.39

Table 5. The factors influencing the consumers run on the organic foodstuff

Question	Number of informants	
	2004	2005
Why do you not buy organic products		
– I do not know, what does it mean "organic products"	17	18
– organic products are more expensive than conventional ones	91	126
– I do not know, where are organic products to buy	27	25
– other reasons	45	42
The presumptions for more purchase of organic products		
– the wider range of offered products	48	37
– the increase in number of sell-point	64	66
– the cut of prices, eventually increase of the household's income	82	118
– other reasons	0	7

For the main factor of the widening the supply, there is held the intensification of organic products advertising mainly on the suppliers´ side. The biggest shops indeed ensure their own promotion through in-store tasting and leaflets, this form could be, however, held as insufficient.

Chosen aspects of organic foodstuff demand

In spite of the dynamic organic market development the ratio of organic products in the total foodstuff consumption in the Czech Republic remains very low – less than 1%. For the purpose of a detailed recognition of grounds leading to the purchase of organic products, the research through the structured questionnaire were made (Živělová 2005). The informants was chosen via random sample.

The number of informants was 764, respectively 324 in 2004 and 440 in 2005. The informants came from different places of the Czech Republic and also from different sized cities.

From the total number of 764 informants, 390 informants did not buy organic products at all (51.05%), i.e. 48.95% did buy the organic products. In 2004, the ratio was 55%. The difference in the biggest file was lowered by the fact that in 2005, the buyers of organic products prevailed. This shift corresponds also with the increasing demand for organic products.

In the informants sample, there dominate women that created in average of both researches 72%. It is logical with respect to the surveyed commodities. In the term of occupation, 49% of the informants were working, 40% students and the remaining 11% are pensioners and others.

Very markedly was increased the number of informants that buy the organic products regularly and that form 17% in 2004 to 41% in 2005, what could be seen in Table 4. The majority of informants that buy organic products embody the regularly purchases in 1-week period. The spare 59% of informants buy the organic products haphazard.

The main factors influencing the decision making about the purchase of organic products are, as was already mentioned above, the economic factors. Their crucial impact could be derived form the answers on the questions directed to the main reasons of consumers resistance to the organic foodstuff. The findings are presented in Table 5.

From the answers on both given questions, it is clear that the household income and the price of organic products are crucial factors restricting the increase in demand for organic food. However, the trend in both followed-up years could be appreciated as positive. While in 2004 51% of informants did not buy the organic products because of the higher price, in 2005 the higher price is the reason only for 29% informants. It could be reflected that there is an increase in the customer awareness about organic food, what is promoted by the fact that 70% of informants in 2005 recognize the logo branding the organic products. Also a lower number of informants adverts to the insufficient number of selling points. Also the range of the offered products has increased, what was reflected in the decrease in number of informants mentioned the insufficient range of organic products as one of the main reasons for not-buying the organic products. In term of the ratio, in the total number of informants, there also decreased the share of those who implicated the higher purchase by the higher incomes or lower price. Even if the economic aspects remain on the first place in the customers' attention, it could be concluded that the customers' willingness to pay the higher costs associated with the production of organic products is rising. However, the insufficient promotion and the scientific warrant of the benefits for consumers are still in the centre.

As another factor influencing the customers´ interest in the organic products, there could be presented the customers reference to the environment and life style. The findings about these factors are shown in Table 6.

In both followed years, there is as the main reason for the purchase of organic products unambiguously set the effort for the fulfilment of the recommendation for healthy nutrition. This reason was in 2005 preferred by 75% of informants. Their ratio increased in comparison with 2005 almost by 20%. A large part of consumers who set their preference on health reasons prefer also the regardful approach to the environment consequent to the principle of the organic agriculture. The other reasons are regardful treatment of animals, better taste of organic foodstuff, preference of the healthy life style, higher quality of organic products compared to those produced by the conventional way eventually the insertion of the organic products into their diet as acceptable diversification. There have appeared also some informants that like to know new possibilities of food.

To the factors influencing the consumers' interest, there can be counted also the level of customers' awareness that could be obtained by different resources. The summary of the main information resources is mentioned in Table 7.

There has been a change in the information resources in 2005, namely the increase of the ratio of advertisement steady ratio falls still on the information gained in the shop and by friends. Other information sources are the findings gained in school, magazines, from different leaflets, internet, and books and on actions arranged by the environmental associations and at the visits directly at the organic farms.

The customers’ awareness still remains at a very low level. The increase of the awareness is one of the main requirements for the increase of the demand for organic foodstuff. The performed researches indicate an improvement in this field, there are still some reserves in comparison to other countries.

Table 6. The reasons for purchase of organic foodstuff

Question	Share of informants (%)	
	2004	2005
The reasons for purchase of organic foodstuff		
– more healthy	54.17	74.60
– the cognition of new things	8.33	2.20
– aversion to the chicane of animals	1.39	1.80
– without chemicals, pesticides	23.61	10.10
– nutritious content	2.08	1.30
– more delicious	11.81	3.90
– life style	4.17	2.60
– superior	8.33	3.50

Table 7. The sources of the information about organic foodstuff

Question	Share of informants (%)	
	2004	2005
Where do you get the information about the organic foodstuff		
– advertisement	8.28	14.85
– in the shop	27.59	25.77
– in media	25.52	14.41
– by friends	27.59	25.76
– another sources	36.55	19.21

CONCLUSION

The further enlargement of the organic agriculture in the Czech Republic supposes the consolidation of the domestic organic market mainly by the widening of the range of the offered products. For the fulfilment of this plan, it is necessary to realize certain steps on the supply side as well as on the demand side of the organic market. Meeting of the demand for organic food in the requested structure is limited by the insufficient production focus of the organic farmers that leads to the necessity of import of many products. Insufficient processing capacities hinder the realisation of organic products on the organic market for prices adequate to the way of their processing, what negatively influences the possibilities of the widening the supply at the hand of domestic producers.

The consumers' decision-making is negatively influences by the higher prices of organic products compared to conventional products that are, however, offset by a higher quality of organic products. The consumers do not always realise this consequence. To this contributes also the insufficient consumer awareness evoking the need of the intensification of the advertisement and promotion of organic products. The problem is often also the credibility of the origin of organic products and the distrust of consumers in the control and certification system. The consumer awareness is, however, increasing.

The action plan of the Czech Republic for the development of organic agriculture to 2010 emphasizes the increasing consumers' interest about the organic food. To the consolidation of consumers trust and ensuring the valid information about the quality of organic products, it is necessary to interpret to the consumers the basic differences between organic and conventional food and the justification of the price differences. In this respect, it is necessary to evolve further research that would objectify the differences and support the information by the scientific studies.

REFERENCES

Jánský J. (2005): Analysis of current situation in sales of selected organic products in the Czech Republic. Agricultural Economics – Czech, *51* (7): 309–313.

Živělová I. (2005): Current situation of demand for organic products in the Czech Republic. Agricultural Economics – Czech, *51* (7): 304 – 308.

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Contact address:

Iva Živělová, Jaroslav Jánský, Mendel University of Agriculture and Forestry in Brno, Zemědělská 1, 613 00 Brno, Czech Republic
tel.: +420 545 132 634, e-mail: podeko@mendelu.cz