

# Situation Analysis of Organic Food Production with Qualitative Market Research

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## SUMMARY

During past decade the general attitude of the population toward health, nutrition, quality and environment remarkably changed. Consequently ecological farming showed an upswing especially in developed countries. Due to growing demand, government subsidies and other economic advantages the cropping area increased and it will keep its pace in the near future. In Hungary the actors of economy have not fitted themselves to changed conditions. Main problem is the presence of quite a narrow domestic market resulting from a purchasing boom by western trading companies. In our survey the input, production and marketing aspects of organic farming were studied through interviewing farmers being involved into organic farming. results highlight the specific features of production in Hungary, its management relations, production structure and environment protectional considerations. As an overall goal it was set forth to identify the main limiting factors of domestic market growth, define the most marketable products and related company forms. Producers' opinion helped us with conducting the above process. Results of interviews were supported by our former experiences.

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## KEY WORDS

organic food production, organic area, ecological farming, registered area, interviews, marketing, purchase

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## INTRODUCTION

In recent decades importance of ecological farming as an environment friendly form of agriculture has increased. Its publicity and acceptance among population improved, market value of such products goes far higher than that of conventional ones and ever more people agree with promoting and subsidizing this form of production. It is an obvious and well traceable process both in EU and in Hungary that agricultural mass production turns toward a more environment friendly production.

Proportion of organic areas increased significantly in recent years caused not only by government subsidies but by growing demand and by more widely accepted 'environment consciousness'. Areas in concern expectably show further dynamic growth in near future. Described tendency did not fail to have its impacts on Hungary. In December 2002 prognostics showed 105,000 ha which is, of course, an estimation (Biokontroll Hungaria Plc controls 103,672 ha). It means 1.7% of total agricultural land has already been turned into organic land. Table 1 shows changes of organically cultivated area and number of producers from 1996.

Market value of organic products produced in 2001 reached as much as 20 billion forints, and only 5-10% of the products serve domestic consumers. Its share from total food turnover cannot be precisely estimated.

Development of organic farming can be described by the growth of area involved into organic production: in 2002 production covered 2,5 times bigger area than in 2000. Next indicator can be the turnover of organic foods which reached 26 billion USD worldwide in 2001. This latter means 23% market potential growth if compared to previous year. Share of organic foods from total food consumption is 1.9% on average. Numbers show the growth of consumers and widening palette of choice of organic foods (Yussefi and Willer, 2002).

Main target markets of Hungarian organic foods are principally the member states of European Union. In these countries - resulting from developed market economy, higher living standards and efforts by commercial sector - a conscious customer segment appeared with willingness to pay for organic quality. In the table below organic area and number of producers in EU-states are shown in the same way as it was given above for Hungary.

Dynamic growth of area, however, is limited by natural, geographical features, but demand is permanently growing. It offers new market possibilities for Central European producers and this potential can be further improved by raising processing level of their products.

Let us take the example of Czech Republic where producers began organic production later than in Hungary but due to high land-based subsidies production today goes on 235,136 ha and that refers to 5.5% of agricultural area. Grain, feed crops and pork are exported mainly to Austria and Germany whereas certain percentages of fruits and vegetables, milk and dairy products, eggs and meat products are consumed on domestic markets. It is the country that can be - due to its geographical conditions and elaborated marketing channels - the biggest competitor of Hungarian organic products (Vaclavik, 2003).

## MATERIAL AND METHODS

First collection of secondary data was done from available literature, congress issues and statistical databases

As for primary data, they were collected through the kind assistance of Biokontroll Hungaria Plc that conducted the randomized selection of producers and informed us about their contact possibilities. Producers who did not reject taking part in the interviews (every twentieth from the random set)

Table 1. Organic area and number of producers in Hungary

Denomination	1991	1996	2000	2002	2006 (plan)
Registered area (ha)	2.840	11.390	47221	105000	300.000
Proportion of organic area	0,005%	0,02%	0,8%	1,7%	5%
Number of producers	56	127	471	995	5000

Source: Biokontroll Hungária Kht., own calculations based on SÖL data

Table 2. Registered organic area and number of producers in EU-states

Denomination	1991	1996	2000	2002
Registered area (ha)	310000	1550000	3778226	5155286
Proportion of organic area	0,2%	1,08%	2,64%	3,6%
Number of producers	15500	60500	130290	175872

Source: own calculation based on annual data of SÖL

were pulled in to our panel. Interviews were carried out through a previously settled schedule.

In the survey individual or joint venture farmers were involved who follow the organic and biological way of farming on ploughlands, in orchards green- and glasshouses or dealing with animal production and beside match to the following conditions:

- registered organic farmers,
- having at least one registered and controlled product,
- having products on the market (exceeding own consumption).

Present survey is the first step of a later series of surveys including interviews with other actors of trading and queries of the biggest possible number of customers.

## RESULTS AND EVALUATION OF INTERVIEWS WITH PRODUCERS

Interview questions can be divided into three main topics, namely purchase, production and marketing. These three fields, however, cannot be distinctively and sharply separated, so in a number of cases the interviewed person had the chance to speak free about his or her specific production conditions. As it was expected the best part of problems could be cleared this way and if our questions are added to these clarified problems we can have a quite clear overview on the general problems the organic farmers are facing with in Hungary. Not only speaking of problems but pointing out main achievements was also a goal of the survey. Both are summarized below in the same order it was set in the interview framework.

### General questions

Most of the involved producers work on more than 50 ha in the form of joint venture. They began organic farming in the early 90s and practically without exceptions their main motive was gaining in profit partially influenced by the presence of foreign ownership or foreign connections of the management. Smaller scale producers turned toward organic farming because they reject chemicals, they wanted fully supply the family with healthy food or they just wanted to widen the palette of their products. Individual farmers with (very) small scale production enjoy special taxation conditions. Each of the individual farmers had some agricultural education and/or experience.

Management of larger units is mostly done by experienced agricultural professionals so in the case of such enterprises the high quality human resource is extremely important.

Reducing economic risks all of these enterprises kept certain conventional production beside the organic branch. Their production structure is designed on the base of one main crop (pumpkin, potatoes, horse-radish) letting other crops in only because of maintaining the obligatory cropping cycle. Most of the land has already been tuned into qualified and registered plots, there was only one site where new area was introduced (caused by the National Agricultural Environment Protection Program issued last year).

### Purchase

Aim of investigating purchase relationships was to map the availability of crucial production factors. Land, machinery, devices and applicators, labor and labor costs as well as availability of chemicals, conditioners and their cost relations are described. When discussing the results an attempt has been made to ensure comparability, however it was found to be hardly possible in case of both crop production and animal husbandry due to different product structures. Generally the following statements can be listed:

- Land itself (excepting a minor percentage) is in own property and it was right at the time the producers started organic farming.
- Gold crown value, type, surface, plot sizes and accessibility of production spots did not have an impact on farming method (organic versus conventional).
- Ecological isolation is ensured and proved everywhere with vegetation straps.
- Machinery is chosen in accordance with needs of conventional farming, except for sprayers and storage facilities, so special machinery is not commonly used in organic farming, if yes then it is also used in conventional farming (e.g. weed-fork).
- In all the farms seasonal labor force is commonly used for manual work, however their total annual effective working time is changing year by year. They are applied in those cultures where production is impossible without significant labor requirement even in conventional production forms (pumpkin, horse-radish, peach). In this case the distinction between the two production methods is also not clear, on one hand it can be heard that manpower usage is more important in organic cultures, even twice as much as in conventional crop-cultures. Specialized and trained labor force, however is not used in any of the two production forms.
- Purchasing allowed chemicals raises no difficulties in farms. There were only some special concentrates reported as being short, these items are used in fruit production. Producers purchase these

chemicals from their local or nearby supplier, no integrator bodies are involved and no new supply resources are sought for.

- Costs of plant protection are not higher than on conventional farms, however higher level of consumption can result additional costs. In this field there was no consensus among the producers, average costs exceeded conventional costs in some 50% of total cases. It is a good example that a farm with pumpkin and grain products reported remarkably higher costs in this category than the other farm of the same kind. Note that plant protection costs are highly influenced by the given technology applied and even within the same technology different factors can have further impacts on it.
- Manure usage means also high costs in all the farms. In a number of cases even its purchase raises problems (e.g. in this year). In farms with animal keeping it does not cause, of course a problem but new regulations coming to force in next year not more than two farms out of the total involved can meet the new requirements. Composting and green manuring were also commonly used, however to less extent than animal manuring.
- Using reproduction materials of organic origin (seeds, breedstock) was not a prerequisite earlier but from 01. Jan. next year European regulations make using them compulsory and it means general problems for practically everybody. Among fruit producers there was only one who can meet this requirement even today.
- Randomly chosen farms showed difference in their integrations level. None of the farms from Western Hungary but almost all of them from Northern and Eastern Hungary belong to an integrated production system. This latter rate expectably increase as EU accession draws near.

### Production

As in most parts of the world, just like in Hungary organic farming principally means organic crop production. It can partially explained by that many of the consumers of organic products are vegetarian in the same time. Low consumption level of organic meat is also caused by its relatively high price. Our panel showed the same scene, not more than three producers are dealing with animal husbandry keeping mainly goats and traditional Hungarian pig, cattle and sheep breeds. As a consequence there is no chance to gather reference data on breed choice. It has to be taken positively, however, that all of them keep native, traditional breeds and it clearly shows that these breeds are more suitable for organic production than the intensive types. A negative aspect is that

even these producers are not really conscious about ensuring biological cycles.

Lack of production contracts raises problems for many producers not only in keeping strict crop cycling but also in forming new culture spots each year, so the yield sometimes has to be sold as conventional product or as animal feed.

Yields have to be evaluated separately per species. Grain, i.e. winter wheat, spelt, rye, barley, triticale and corn yields only 70-80% of the conventional cultures. Under favorable conditions and suitable handling pumpkin, potatoes, horse-radish, raspberry and carrot can yield even more on the average than in conventional farming.

Despite lower yields the involved enterprises have profitable operations because of the 20-100% extra price they can realize on the market. On mixed farms (with both organic and conventional farming) cost level of organic production remains below income level and they calculate with 20-30% profit rate. A peach farm - due to the characteristics of a plantation like culture - can count year by year with higher yields and higher income. Producers of annual crops can expect higher income levels from increasing market prices, their eventual doubts are raised only by general agricultural risk factors. It is worth mentioning that they are not planning with increasing the cropping area even despite their relatively favorable economic conditions.

As for the quality of products the producers reported lower quality levels for organic crops, due mainly to minimizing chemicals. Animal keeping producers, in contrary, reported higher product quality in case of organic products.

### Marketing

According to statistical data 90-95% of organic products produced in Hungary found foreign markets. It was stated also by the producers involved into the survey. Products are sold generally in one turn for Hungarian whole salers who later, after processing and packaging sell the lots further. An exception can be the case of small scale producers who sell the products directly for local consumers. Pricing - except for 2 enterprises that equals 10% of the panel - is the privilege of the producer. It reflects clearly the phenomena of a demand driven market.

Fruits, potatoes, carrots and meat sorts are processed mainly by Hungarian facilities. Best part of such end-products are exported, too. It can be commonly observed that in case of e.g. pumpkin, horse-radish and grain the producer does not bother even with drying or cleaning but right at harvest the yield is bulked on the truck of the tradesman. Due to the presence of permanent purchasers and high market demands none of the producers spent



money on promotion and advertisements, they are not making efforts for obtaining higher publicity of their products.

Right after turning their production into a registered organic type the producers faced (for 2-3 years) the problem of missing distribution channels so they were forced to sell their products on the market of conventional goods or in some cases they rented storage capacities. Today they overcame this problem, the products are sold for the characteristic higher price that can differ region by region within the country. Pricing, again, is the privilege of the producer. In case of fruits (peach, apple, raspberry) the producer obtains the extra price for organic quality but the pricing is driven by the coolstores owned by foreign bodies. In this latter case local storing cannot be a solution because of the high capital intensity of the investment.

Rate of extra price differs from product to product, in case of oil-pumpkin it is 100%, for potatoes, horse-radish and carrots 20-50%, wheat and rye 30-40%, peach 20-100%, raspberry and apple only 10-20% depending on quality and possible later usage directions.

Packaging happens, in most cases, only for equalizing the lots, e.g. pumpkin seeds, potatoes, horse-radish, carrots in 20-50kg plastic bags. Wholesalers repack them as requested by their consumers. Grain is transported in bulk. So are the fruits but in this case potential, mainly local consumers are offered with the so-called pick'n'pay occasions (usually with slight success).

Two producers plan to start up with retail packaging and strengthening the domestic distribution channels. When asking them about the planned time schedule, methods etc., they, however, could not give exact answers. Development of pilot farms can also be found among the aims, or it has already been started, mainly because of getting the obtainable state subsidies.

In Hungarian organic farming production units with high output level follow the patterns of conventional large-scale farms. Products are produced in huge lots and marketed purely for profit. Little respect is given for ecological development of soil, landscape conservation, environment protection. Commercial channel of their leading products is mainly monotype.

Crops produced only for keeping the cropping cycle are sold for anyone with the best offer, so economic risk in this case is high. They fail to have a sense for feeling the demand of retailers and consumers.

Animal keeping that can ensure biological cycles is far not built into the system and that has a breaking effect on domestic market of organic products:

- Manure does not come from organic animal production.
- Narrow choice of organic animal products which, on the other hand fail to improve the acceptance of the products by consumers.
- Ever changing and permanently widening requirements of consumers cannot be satisfied.

Position of producers exporting on western markets is quite unfavorable even in this year because of large quantities of grain products from competitor countries where organic prices are just a bit higher than conventional ones. A possible opportunity can be domestic processing of products and improving product quality on domestic markets. It seems to be necessary to strengthen the integration process of producers, hence ensuring unified quality which is a prerequisite in selling for supermarket chains. It is important to have sufficient lots of products in order to strengthen the negotiation position with retailing chains.

According to our results in case of small scale farmers - living and working isolated - the opportunities cover local processing of products (housemade goods) and distribute them in respective channels just as ecotourism, farm-gate-selling, package sending services. They have advantageous positions in "conquering" a narrow but payable segment of consumers through the unique features of the farm and products and offering human-scale services.

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