

**STUDIES IN
AGRICULTURAL ECONOMICS
No. 111**



**Budapest
2010**

Studies in Agricultural Economics No. 111

The Studies in Agricultural Economics is a scientific journal published by the Hungarian Academy of Sciences and the Research Institute of Agricultural Economics, Budapest. Papers of agricultural economics interpreted in a broad sense covering all fields of the subject including econometric, policy, marketing, financial, social, rural development and environmental aspects as well are published, subsequent to peer review and approval by the Editorial Board.

Editorial Board

Popp, József (Chairman)
Szabó, Gábor (Editor-in-chief)

Barnafi, László (Technical Editor)	Lehota, József
Bojnec, Štefan (Slovenia)	Magda, Sándor
Cruse, Richard M. (USA)	Mészáros, Sándor
Csáki, Csaba	Mihók, Zsolt (Associate Editor)
Fekete-Farkas, Mária	Nábrádi, András
Fehér, Alajos	Nagy, Frigyes
Fieldsend, Andrew	Szakály, Zoltán
Forgács, Csaba	Szűcs, István
Gorton, Matthew (United Kingdom)	Tóth, József
Heijman, W. J. M. (The Netherlands)	Udovecz, Gábor
Kapronczai, István	Urfi, Péter
Kiss, Judit	Vizdák, Károly
Lakner, Zoltán	

Manuscripts should be sent via e-mail to the Editor-in-chief (aki@aki.gov.hu). Instructions for the authors can be found on the website of the Research Institute of Agricultural Economics: <http://www.aki.gov.hu>

HU ISSN 1418 2106

© Research Institute of Agricultural Economics
1463 Budapest, POB. 944. Hungary

Concentration of the trade and the small-scale fruit and vegetable producers – practices in Hungary and in the European Union¹

Kürti, Andrea
Kozak, Anita²
Seres, Antal

Abstract

This study examines the conflicts arising from the requirements of the food retail chains and their possible solutions, based on an analysis of the foreign and domestic trade literature and on a domestic assessment of 2008. Direct supplies from small-scale producers have future prospects only in the field of niche market products. Only production organisations integrating small-scale producers may be successful in the supply of large quantity products of homogeneous quality. In Hungary, similar organisations – principally POs – still do not have a role comparable to that they fulfil in more developed countries of the European Union in the field of the supplies to the food retail chains. For increasing supplies, the domestic small-scale producers should change their mentality, and increase their adaptability and marketing-oriented innovative skills. The state, on the other hand, should grant assistance in mitigating the lack of capital due to the small-scale production and support more efficiently the increasing role of the different producer organisations, especially of the POs.

Keywords

Concentration, food retail chains, supply, small-scale producers, fruits and vegetables

Introduction

Throughout Europe the channels to market of fresh fruits and vegetables have recently undergone considerable changes. The importance of the traditional local producers' markets has decreased while a growing number of large producers or producer organisations are directly supplying the food retail chains, thus decreasing the role of the wholesale sector. The same process, though more slowly and by cyclic movements is also to be observed in Hungary. In the process of commercial concentration, usually small scale producers with a diverse range of products fall into the weakest position and face the toughest challenges. The importance of this situation is demonstrated by the fact that about 80% of total production derives from medium and small-size enterprises (Erdész, 1994).

A similar concentration of the demand, therefore, requires reactions from small-scale producers getting into a more undefended position. It is however possible to define such reactions only through recognising the concentration process in effect on the demand side, that is, in the food retail trade and its effects.

There are several methods of approach known in the trade literature for investigating the concentration of the food retail trade and the relationship between the large food retail chains and the agricultural producers, including competition and market structure analyses, market dominance research, logistics-oriented study of the vertical co-ordination, the supply chain and of the product path and marketing-oriented analysis (Juhász et al., 2008a). We have opted for the marketing-oriented approach starting out from the customers' demand, joining works such as Lehota and Tomcsányi, 1994; Fertő and Szabó, 2004; Kohls and Uhl, 1990; Meulenbergh, 1993; and Szakály et al., 1994.

¹ In the course of the assessment, the part of the EU excluding Hungary will be understood under the EU.

² Research Institute of Agricultural Economics, 1093 Budapest, Zsil u. 3-5, Hungary. kozak.anita@aki.gov.hu

The purpose of the study is to examine the conflicts arising from the demand and requirements of the food retail chains and their possible solutions within the small-scale production in the European Union and in Hungary.

We have not examined the sales channels other than food retail chains (i.e. wholesale markets, consumer markets, independent small food shops and specialised shops, direct sales by producers etc.).

Methodology

We analysed the foreign and domestic trade literature and compared the practices followed in Hungary according to a domestic assessment made in 2008 and those followed in the European Union. When assessing the domestic situation we remembered that concentration of the food retail trade is a general trend in the developed world to which agricultural small-scale producers have to adapt. Therefore we are not attributing blame to the food retail chains and are not examining issues falling under competence of the market supervision (market dominance, sales below purchase price, shelf money, listing fees etc.), nor the system of state subsidies or government regulations. By revealing the conflicts emerging from the demands and requirements of the food retail chains and their causes within small-scale production, we have endeavoured to encourage marketing-oriented adaptation of the small-scale producers and, within this, expansion of their supply to food retail chains.

From the 11 food retail chains involved in the domestic assessment, eight are multinational and three are domestic chains. These chains have the following profiles:

- In majority hypermarkets: 3
- In majority supermarkets: 2
- Discount stores: 2
- Cash & Carry warehouse: 1
- (Domestic) chains with differentiated networks, where small shops have an important role: 3

During the domestic assessment, eight enterprise case studies and six interviews were performed. The case studies are divided as follows:

- Headquarters of multinational chains: 7
- Headquarters of domestic chains: 1

The interviews were performed at:

- Headquarters of a multinational chain: 1
- Headquarters of a domestic chain: 1
- Regional purchase centres of domestic chains: 3
- Wholesale merchant supplying food retail chains: 1

Results and discussion

Food retail trade tendencies

In Europe, shares of the different shop types show different trends: while the share of hypermarkets is already decreasing in Western Europe (partly due to the restrictive policies, rendering difficult the opening of new shops), it still continues to grow in the eastern regions. Hyper- and supermarket and discount stores have a leading position in the food retail trade within the European

Union. Both regions are characterised by increasing expansion of discount stores (especially of the hard discounters) (Verdict, 2008). While in 1992 their participation amounted to 7% in the European market, it had already grown to 10% by 2003 (Planer, 2004). In some countries, for example Germany, considered as the country of origin of the discount stores, and Norway, their share remarkably exceeds this value. Principally soft discount stores are typical in Scandinavia, that have a larger assortment of manufacturer brand products and of fresh products, such as fruits and vegetables. In Western Europe – as in Hungary – the discount stores have a smaller assortment of fruits and vegetables. On the contrary, hyper- and supermarkets have larger selection of these products.

Through the expansion of discount stores, sales of fruits and vegetables in these types of shops are increasing. As the chief executive of Ahold stated, 8-14% of the chain’s turnover is derived from sales of fruits and vegetables. The strategic importance of fruits and vegetables is also demonstrated by the fact that these products are usually located near the entrance, as they are able to attract most customers into their retail units (Revista Mercados, 2007). Participation of the discount stores’ sales of fruits and vegetables is also remarkable in Hungary. Hungarian large floor-space food shops also typically sell fruits and vegetables through strategically positioning them near the entrance, in order to increase their attractive force, because the sight of goods arranged on the shelves has a determinative impact on the shops’ reputation, influencing turnover.

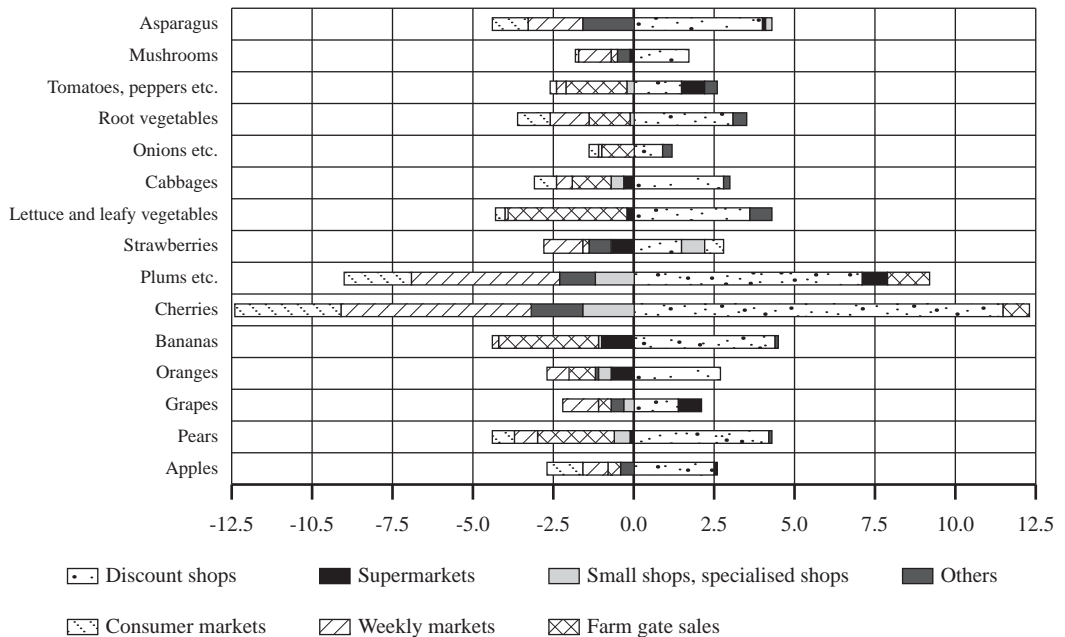


Figure 1: Changes of the purchase sources of certain fruits and vegetables between 2003 and 2005 in Germany, in percentage points

Source: Own calculation based on the data of ZMP (Zentrale Markt- und Preisberichtsstelle für Erzeugnisse der Land-, Forst- und Ernährungswirtschaft GmbH).

Figure 1 showing the changes in percentage points of the purchase sources of certain fruits and vegetables between 2003 and 2005 in Germany illustrates well the trend of expansion of the discount stores in the sales of fruits and vegetables. In aggregate, it can be observed that sales in Germany are shifted towards the discount stores, mainly to the disadvantage of those selling on

the weekly markets and of producers. The biggest shift occurred in the sales of cherries, plums and greengages, where the sales values in the discount stores and consumer markets were higher in 2005 compared to 2003, to the detriment of those realised on weekly markets and of the direct purchases from producers.

Concentration of the food retail trade is characterising both the Eastern and Western European regions and Hungary, too, even though differences may be observed among individual countries as regards the ways of implementation (opening of new shops or mergers and takeovers). In Hungary, a very high degree of enterprise concentration had already developed by 2004 in the field of mixed profile food trade (hyper- and supermarkets, as well as discount stores belong to this category). Nearly 60% of the total returns from sales were concentrated at the 28 large enterprises, representing only 0.1% in number, while the 17,735 micro-enterprises, with 95% share in number, realised just 19% of the returns. The degree of concentration of this sector is further increased by the fact that this is the branch most characterised by the propagation of purchase and marketing associations (Juhász et al., 2008b).

A further increase in concentration is expected in the next five years. In Western Europe, the share of the 30 leading food retail chains is already high (it was 68% in 2004); therefore a slower growth may be expected here. According to Planer (2004), the indicator may attain 71.5% by 2009. On the contrary, the share of the first 30 food retail chains amounted to only 48% in Central Europe, quickly growing and attaining around 59.5% by 2009. The increasing concentration will imply growing pressure for fruit and vegetable suppliers and among them small-scale producers, because they will have to face ever more powerful customers when selling their products, thus further impairing their bargaining positions.

The expansion and leading market position of the hyper- and supermarkets and of discount stores are trends characterising also Hungary's food retail trade (Juhász et al., 2008a). At the same time, however, considerable differences also exist between Hungary and the more developed countries in respect of the sales channels. While the proportion of the traditional local markets has considerably decreased in the developed countries, in Hungary, the consumer markets continue to have an important share. A further Hungarian peculiarity consists in the important role of the nearby speciality shops and of the small self-service shops (Kürti et al., 2009).

In the environment of sharpening competition, in order to increase their competitiveness through cutting costs and improving quality, the commercial chains have introduced the following methods also in Central East Europe (Dries et al., 2004):

- Centralised purchasing system
- Cross-border purchasing system
- Specialised wholesalers
- Employment of global multinational logistic companies
- System of preferred suppliers
- Development of own standards

In the EU, the role of the long-term partnership and of the organised, contract-based relationship between commercial chains and suppliers is increasing. According to our domestic assessment, this trend is encumbered by the short-sightedness of the small-scale producers and by the remarkable share of the black economy. One of its consequences is unreliability. The overwhelming majority of the small producers are not willing to commit themselves to the food chains, to invest and to assume risks. If they have an opportunity to sell their produce at daily prices exceeding those contracted with the chains, they sell it to such customers in breach of their contract. They do not appreciate the benefits of a long-term relationship.

Sales difficulties and peculiarities deriving from the special character of fruits and vegetables

Due to the changes in purchasing habits, the demand for fruits and vegetables by the food trade chains has transformed during the recent period. Consumers require a greater variety of products in larger quantities, partly due to the increase of consumption and partly due to the fact that the large floor-space food retail shops have become the main purchasing source of the fruits and vegetables consumed. This situation has a detrimental impact to the small-scale producers, able to supply only small quantities, both in the European Union and in Hungary.

Fresh fruits and vegetables are special goods among food products, and their peculiarities cannot be disregarded by small producers. The factors determining the special character of this product line are summarised in the following five points:

- 1) These are perishable products, or products that, even if still consumable after a longer period, their enjoyment value and thus their quality is quickly diminishing due to loss of water, ripening and other factors³. As a consequence they require more efficient logistics than the majority of other foodstuffs.
- 2) Conversely, fruits and vegetables have the important property that the products included here are mainly undifferentiated, i.e. hardly distinguishable from similar products of other “brands”. Even though there are initiatives to overcome this difficulty through introduction of brand names (for example Dole and Chiquita for tropical fruits or the Blackcat brand of the Spanish Anecoop organisation, or even the quality-based differentiation of the French Blue Whale Premium, Blue Whale and Blue Whale Prima brands), these brands provide added value for customers only if a very large product selection is available. In the case of other well differentiated foodstuffs customers may even defer the purchase if their preferred brands are unavailable; however this is not typical of fruits and vegetables.

In the last decade, the own branded products of the food retail chains have appeared on the shelves. These were principally processed products. While previously the presence of similar products was not characteristic in the fruit and vegetable sector, by today they have penetrated also into this product segment. Metro Group, for example, introduced in 2005 the Cali brand for the excellent quality fresh fruits and vegetables in replacement of the previous own brands applied at national level. Customers are assisted by the help of a colour coding system: vegetables are coded green, exotic fruits red and mushrooms purple. With annual sales of three million tonnes, the Metro Cash and Carry self-service stores, Real hypermarkets and Extra supermarkets belong to the largest food retail chains as regards fruits and vegetable sales. More than half of the turnover is constituted of own brands, that is from goods produced by farmers contracted exclusively for the food retail chain. The quality of these products is guaranteed throughout the supply chain – from the farmer to the shop – thanks to the special quality assurance system – EKS – developed by the company (Metro Group, 2005).

In Hungary, own brand products of the food retail chains are still not typical. Their role however is expected to increase in some chains, narrowing further the opportunities of small-scale producers due to the large volume requirements. Differentiation of the products is however possible by other means than brand names, too. Demand for products deriving from ecological farming, for the so-called regional products produced by local farmers, for

³ Of course there are some exceptions that may be stored for long time, such as nuts and almonds.

fair-trade products etc. is increasing. These requirements are recognised also by several food retail chains that have adapted their purchase policies in compliance with such needs.

According to a study prepared by GfK Hungária Market Research Institute, due to the revival of the traditional home cooking habits, domestic traditional flavours are increasingly frequently found on the table of German consumers. Accommodating themselves to this trend, several German food retail chains pay increasing attention to selling products produced in their own region. For example, beyond products from ecological farming and the so-called fair-trade products, REWE offers regional products in increasing quantities and every week on its leaflets introduces a local farmer producing goods offered by the shop, thus trying to ensure prospects for the region together with the customers. At the same time, however, Wirthgen (2004) emphasises that even though the system of regional vertical marketing could be a successful strategy because consumers have manifested their preferences for regional products, especially if these are controlled and produced in environment-friendly manner, the food retail trade sector, though not being averse to selling regional products, is not inclined to pay more for them.

According to our domestic assessment, similar trends are already present at some food retail chains in Hungary. One multinational chain, for example, offers typical local specialities (tomato, paprika, onions, and apple) on separate shelves in a central location. Price is of secondary importance in the case of similar premium quality products.

- 3) This category includes mainly seasonal products and their offer throughout the year cannot be granted under the actual climate conditions, even though consumers would require it. With certain (but not every) products this may be ensured partly through forcing and partly through application of up-to-date storing techniques. But these are extremely costly procedures; therefore food retail chains both in the EU and in Hungary usually satisfy the extra-seasonal demand for fruits and vegetables with imported goods.

The principal reason for the conflict between seasonality of production and consumer demands is that consumers already expect a uniform offer throughout the year. The food retail chains are able to mitigate this conflict only by importing products. In addition, import offers are often more favourable than domestic supplies. Consequently, imports constitute one of the critical points of the relationship between food retail chains and domestic suppliers, because imports are narrowing the opportunities of the domestic suppliers.

- 4) Product innovation is extremely slow in fruit plantations that start to bear fruits only after several years; therefore reactions to the new consumer demands are much slower than in the case of other food products.
- 5) Due to the age of the plantations and to environmental effects the quantity of produce is fluctuating and cannot be exactly defined in advance. Even if small-scale producers are not able to change certain factors (age, innovation) as a matter of course, through co-operation and co-ordinated production of individual farmers the poor variability of products and the seasonality could be improved.

Requirements of the food retail chains against suppliers and preparedness of the producers

Lehota and Fehér (2007) discuss the knowledge of the food retail trade's demands and requirements, as this knowledge has enhanced importance due to the concentration of the trade. Knowing the customers' requirements is especially important in the case of the food retail chains. A fundamental pre-requisite for supplies include that the product should be delivered (1) in proper quality, (2) in sufficient quantity, (3) at due time and (4) at favourable prices to the food retail chain's storage facility or sometimes to the retail unit itself. There are no differences regarding these universal basic requirements between Hungary and the European Union.

- 1) Availability of the product of a suitable quality is indispensable. *Product quality is basically determined by two factors: the quality of the fruit or vegetable itself and the additional services.* In other words the quality of the produce is only a part of the quality of the goods. The parameters influencing produce quality may be divided into three main categories. There are properties which can immediately be determined, such as cleanliness, colour, fragrance, shape, decay, different injuries and freckles etc. There are also properties which are easy to experience, such as the flavour and whether the fruit peels easily (for example, the ease of peeling was an important factor in spreading of clementines), the consistency etc. The third category includes the properties that can be experienced only during the long term consumption and the so-called confidence properties. These include for example the fruits' nutritional value and vitamin content or whether they are free from chemicals or come from ecological farming. The properties easy to determine are perhaps the most important, because consumers may assess them unequivocally during the purchase and also the procurement manager of the commercial chain accepts or rejects products on the basis of such properties. Beyond size and ripeness, the merchants interviewed by Beamer (1999) mentioned as the most important quality requirement proper selection and longest possible shelf life in the case of fresh fruits and vegetables.

The majority of the confidence properties can be certified through application of different certification systems. For example, in Hungary 98% of the products derived from ecological farming are controlled by Biokontroll Hungária Nonprofit Kft. supervised by the Ministry of Agriculture and Rural Development, but there are national level organisations authorised to perform audits throughout Europe.

Beyond quality of the produce, the so-called additional services also contribute to the final quality of the product, vesting it with new properties, allowing for example ease of transport (packaging), easy handling during processing (peeling, pre-washing, slicing etc.). The majority of these additional properties are developed during the post-harvest treatment in the fruit and vegetable farms. The purchase of the necessary up-to-date equipment is however a capital-intensive investment affordable mainly only for the producer organisations; small-scale producers are at a disadvantage in this respect in the case of the most of the produce both in the European Union and in Hungary. According to our domestic assessment, Hungarian small-scale producers have a considerable lag compared to their Western European companions in the field of the additional services and of the preparation of produces for goods. In the majority of cases, technical development was missed due to lack of capital, therefore they are not able to supply products which are cleaned, selected, packaged and labelled in compliance with the food retail chains' requirements.

There are different regulations, standards and certifications at international, national or company level or even in the form of civil initiatives for warranting and attesting the product characteristics. Also, several food retail chains have elaborated similar requirement systems, exacting suppliers to comply therewith. Such systems include for example BRC, EUREP-GAP or Filière Qualité Carrefour. With the help of similar company and other standards and through imposing certification systems, the food retail chains strive to guarantee continuous good quality and security for their consumers. At the same time, there is an increasing demand from consumers to observe other criteria. These include for example sustainable agricultural production, organic products, social and environmental aspects, phytosanitary requirements etc. The chief executive of Ahold mentioned the observation of the delivery times and, beyond sufficient quantity, the existence of quality certificates and traceability as the most important requirements from suppliers (Revista Mercados, 2007).

The quality of the products is changing with time, therefore, the producer's task is not only guaranteeing excellent quality upon finishing harvest but – if he/she would like to be the supplier of a food retail chain – good quality should be guaranteed until arrival to consumers. Beamer (1999) interviewed a merchant of Virginia on this issue, who expressed the opinion that farmers should consider the product their own from sowing until reaches the table of consumers. According to him, even though the products of several producers are impeccable at the time of harvest, when it comes to the post-harvest treatment, packaging, transport, cooling and other procedures, they have no idea what steps would be required for guaranteeing arrival of the goods in the best possible quality to the consumers' table. According to Beamer (1999), though the local farmers would be able to supply fresher products to the food retail trade, without pre-cooling and if not transported in cold-storage trucks, local products are received in such decayed condition that it is better to transport goods from greater distances.

The recent changes in food consumption trends, in which positive and negative economic changes had an important role, have lead to the transformation of the demand for fruit and vegetables. Though in some countries (especially in the countries in transition in the 1990s) fruit and vegetable consumption has decreased compared to the previous period, in several countries of Western Europe a growth of consumption has been experienced. In addition, by the expansion of urbanisation and of the modern lifestyle, demand is continuously increasing for highly processed, high added value, so-called *easy-to-consume* products; packaging is becoming more important, together with other additional services (sliced, pre-prepared goods), while the issue of quality and food safety has also gained emphasis (Van der Meer, 2004). The trend of healthy lifestyle and the wellness wave brought prosperity for healthy food, such as vegetables, fruits, fishes, and also consumption of organic food is continuously growing.

The demand of consumers – as participants located at the apex of the product path – for special products is transmitted by the food retail chains to producers. Thus, the commercial chains are principally conveying the consumers' requirements with their increased quality exigencies, when asking for washed and properly prepared fresh products from suppliers.

Increasing shelf life of the fresh products is a requirement not emanating from consumers; this need could be satisfied through plant improvement and different post-harvest procedures (pre-cooling, chemical treatment). Homogeneous quality (uniform size etc.) is a very important requirement of the food retail chains in respect of fruits and vegetables. Experience both

in Hungary and abroad demonstrate that this requirement (large homogeneous lots) cannot be satisfied by single small-scale producers.

- 2) The second group of problems concerns the issue of adequate quantities. The majority of European countries, and also the Hungarian fruit and vegetable production, is characterised by fragmentation. This constitutes a difficulty in respect of supplies to the food retail chains, because they usually require the supply of large, homogeneous quantities. As a general rule, the economic ordering quantity constitutes one of the basic concerns of supply chain management. Its determination is indispensable because the supply costs are constituted of variable costs and of a fixed cost portion; consequently, goods ordered in very small quantities may have extremely high specific ordering costs. These high costs are the very reason for the preference of the food retail chains for mainly ordering large quantities; single small-scale producers are usually unable to fulfil such orders, while food retail chains are not inclined to assume the increased transaction costs implied by the need to deal with several suppliers. The solution of this problem could be the establishment of producer organisations, co-operation of the producers on the one hand. On the other, in the case of niche market products, of which smaller quantities are ordered by the food retail chains, small-scale producers also have an opportunity to become suppliers. The Irish FORFÁS National Advisory Body for Enterprise and Science also considers niche market products as the most promising category for small and medium-size (FORFÁS, 1999). This trend is typical also in Hungary. Table 1 shows the structure of suppliers for seven domestic multinational food retail chains. It shows that large producers and POs have a determinative share in the supplies to all but one commercial chain. The proportion of direct supplies to the seven multinational chains by small-scale producers is low (0-5%), with the exception of one chain (15%).

Our domestic assessment shows that direct supplies to the food retail chains by the small-scale fruit and vegetable producers have only future prospects in the field of special, niche market products also in Hungary. These are typically not mass products but special produce requiring manual work, specialities, local products and delicacies, where freshness of the produce is indispensable. The opportunities in this field are still less exploited by the domestic small-scale producers than by their Western European companions.

Our domestic assessment also shows that direct supplies by small-scale producers have a greater share in the domestic food retail chains, where the network includes mostly small and medium-size shops and purchasing activities are not centralised to the same extent as with the multinational chains. Table 2 presents the purchasing structure of one of the assessed domestic food retail chains. The directly supplying small-scale producers have a 40% share in the total supplies. As many as 300 small-scale producers delivered goods to the central storage facility during the assessment. At the other two domestic food retail chains examined by us, supplies partly through wholesalers and partly through purchases by the smaller shops directly from small-scale agricultural producers were typical.

Table 1

Structure of fruit and vegetable supplies of seven multinational food retail chains in Hungary*

Type of supplier	Number of suppliers	Participation in the supplies (%)	Participation trend
Company # 1			
Large producers and POs*	5	65	Increasing
Wholesalers	3-4	30	Strongly decreasing (65% three years ago)
Small-scale producers	2-3	5	Slightly increasing
Total	10-12	100	
Company # 2			
Large producers	5	20	
POs	10-15	65-70	Increasing
Wholesalers	4-5	10	Decreasing
Small-scale producers	2-3	5	Increasing
Total	25-30	100	
Company # 3			
Large producers	6-8	10	Unchanged
POs	3-4	30-35	Slightly increasing
Wholesalers	6-8	50	Unchanged
Small-scale producers (excl. pickle producers)	6-8	5	Unchanged
Total	25	100	
Company # 4			
Large producers			
POs	6-8	90	
Wholesalers		5	
Small-scale producers	8	5	
Total		100	
Company # 5			
POs	5-6	80-90	Increasing
Wholesalers	15-20	10-20	Decreasing
Small-scale producers	1-2		Decreasing
Total	20-30	100	
Company # 6			
Large producers and integrators	25	60	Increasing slowly
POs	2	10	Increasing slowly
Wholesalers	2	30	Decreasing slowly
Small-scale producers	-	-	-
Total	29	100	
Company # 7			
Large producers	20-25	40	Unchanged
POs	10	40	Unchanged
Wholesalers	6	5	Decreasing
Small-scale producers	15	15	Unchanged
Total	50-55	100	

* Estimated data. Data of some chains are incomplete. No data were supplied by one of the chains.

** POs: Producer Organisations.

Source: Data supplied by the food retail chains.

Table 2

Structure of the fruit and vegetable supplies at one of the domestic food retail chains*

Type of Supplier	Number of Suppliers	Participation in the supplies (%)	Participation tendency
Large producers	-	-	-
POs	1	40	Unchanged
Wholesalers	10	20	Decreasing
Small-scale producers	300 (decreasing)	40	Unchanged
Total	310	100	

* Estimated data.

However the more fragmented purchase and sales system of the domestic food retail chains has disadvantages: lower efficiency, more expensive purchases, distribution and marketing. The 300 small-scale producers – supplying one of the domestic chains – are difficult to handle, therefore hardly sustainable in the long term. As a result, at two of the domestic chains (including that in Table 2) concentration of purchases is already considered or in place and this will diminish the opportunities for directly supplying small-scale producers.

The advantages implied in the economies of scale and in co-operation are clearly demonstrated by the case of the British Well-Pict European that organised berry growers in order to directly supply to ASDA supermarkets in Devon and Cornwall. Growers (of mainly strawberry) deliver their fruits to a farm, from where the goods are transported to the local ASDA supermarkets. The objective is to attain higher prices and to decrease the transport mileage (previously growers delivered their goods to an ASDA distribution centre, from where the fruits were practically redelivered to their starting point) (*Local farmers pilot...*, 2006).

- 3) The goods have to be delivered at due times, in the case of the multinational food retail chains mostly a on daily basis. This is only possible with proper skills and through co-operation. Our assessment however showed that Hungarian fruit and vegetable producers typically like dumping goods onto the market on the one hand and, on the other they would supply less frequently and with large quantities at a time. This is principally due to the lack of storage facilities and to the expected higher prices.

Supplies require a high degree of logistic organisation – especially in the case of rapidly decaying produce – in order to adjust harvesting activities to the supplies. This problem can be better resolved by the producer organisations, through implementing their own logistics system. For example, the Spanish Anecoop organisation, partly for the sake of its expansion in Central-East Europe, and partly for serving their supplies to Germany, has established a logistic centre equipped with the most up-to-date technologies for satisfying the demands of the retail chains within the region. The centre has both BRC and IFS certificates.

The food retail chains now have requirements of suppliers even with respect to logistics which are increasingly difficult to satisfy, such as for daily supplies, which is becoming typical in the case of quickly decaying produce (FORFÁS, 1999). Small-scale producers are usually unable to comply with such requirements, especially if the goods have to be delivered to the chain's logistic centre. It is easier if the supplies are directed to the retail units, as it is evidenced by the example of the Cornwall farmers. Our domestic assessment showed the same problem in Hungary. The overwhelming majority of the fruit and vegetable small-scale

producers are unable to connect to the food retail chains' logistic system as they have insufficient transport capacities and transport means and they cannot justify the cool chain. Product path and logistics functions are emerging that the single small-scale producers are unable to guarantee alone and therefore they cannot become suppliers.

- 4) The strong competition in the food retail trade manifests itself principally as price competition, mostly between agricultural producers and among them small-scale producers. Many producers both in the EU and in Hungary complain of low prices. This is due to the extremely strong competition among food retail chains, where prices have a determinative role. In this situation the food retail trade would like to receive the highest possible value at the lowest possible price and this may often be obtained through marketing imported products and neglecting the local producers. This is especially true for manual work intensive products, in which case farmers of the developing countries have access to labour at considerably lower costs. In addition, more and more South American and Asian companies have suitable certification systems for complying with the quality requirements of the food retail chains.

According to our domestic assessment, the low price requirement and the consequent need for extremely strict cost management is a condition very hard to comply with for small-scale producers of fruits and vegetables because the majority cannot guarantee a production volume that would allow profitable supplies to large food retail chains even at lower prices. Due to their size, the efficiency of the small-scale producers is anyway low and their cost level high. Therefore, their competitiveness as suppliers is weak.

Beyond these basic criteria, the multinational food retail chains – in compliance with the practices usual in the EU and similar to other products – are also raising new expectations in the case of fresh products, such as automatic ordering or introduction of category management (Dimitri et al., 2003). However the related very expensive investments require extremely high expenditures from small-scale producers, but the finance is hard to raise and returns are low. As a consequence of the obviously high requirements, individual small-scale producers often rule out the possibility of supplying to food retail chains. This is partly due to the poor co-operation among small-scale producers and partly to insufficient knowledge of the customers' requirements and consequently to the lack of the suitable commodity fund.

The wide product range is a strategic requirement of the multinational food retail chains. This is also confirmed by our domestic assessment. Three categories could be differentiated in respect of the fruit and vegetable assortment found in the food retail chains investigated. The first category is that of the chains having 30 to 100 articles. Discount stores and the domestic chains operating smaller and medium-size shops belong to this category. The second includes the chains with about 150 to 300 elements. The majority of supermarkets and hypermarkets belong to this category. The third one includes the chain of hypermarkets with about 350 to 400 articles. The connection between assortment and turnover is usually characterised by the fact that the overwhelming majority of the turnover derives from considerably fewer articles than the whole range.

Beyond increasing the range, the food retail chains have an interest in expanding the selection of these products – perhaps with specialities – also due to the customer-enticing effects of fresh fruit and vegetables. The presence of more varieties of vegetables and fruits on the shelves implies on the one hand the appearance of non-endemic fruits and, on the other the availability of endemic fruits outside their ripening season, attained either with the help of cool storage or through extension of the season through different cultivation techniques (e.g.

forcing, utilisation of ripening accelerators) or by choosing a suitable variety structure, or even from imports. A consequence of these post-harvest technologies and, in part, of the abolition of the factors restricting imports is that in the case of several fresh products the offer is available throughout the year and that several tropical and subtropical products, until now less known and less popular, have appeared on the shelves. Lentz (2004) emphasised that there are more articles in the fresh fruit and vegetable category in supermarkets than ten years ago.

Not only the greater diversity of the fruit and vegetable species may lead to the expansion of the range. The supply of new varieties that better satisfy the requirements of consumers may also offer opportunities to producers. For example, clementines – mainly due to the ease of peeling and to fewer seeds – have become an everyday product. However the development of similar products mainly goes beyond the possibilities of the single small-scale producers. Producer organisations also have an advantage over small-scale producers in the field of research and development. The Spanish Anecoop is a good example: it maintains an experimental farm of 20 hectares, of which one task is developing new products. The organisation has successfully launched on the market some revolutionary new products developed here (for example seedless water melons with red and yellow flesh, different new varieties of nectarines and several lettuce varieties), thus gaining an advantage against the traditional products of the other suppliers.

Producer organisations

Collaboration between producers may be a successful answer to the many problems outlined above (Z. Kiss, 2003). The horizontal market structures provide instruments for granting competitive advantages and the agricultural marketing literature emphasises the benefits of the producer organisations. They are also indispensable because the multinational food retail chains do not assume the task of directly integrating the small-scale producers and the related costs (Wu Huang, 2004). This is equally true for the European Union and for Hungary. Shaw and Gibbs (1996) recapitulated the reasons that render important the co-operation in the agricultural sector as follows:

- Instability of the market,
- Relatively low level of product differentiation,
- Large number of agricultural producers.

In their view, agricultural co-operations give the following advantages:

- Increased bargaining power,
- Economies of scale in selling and purchasing,
- Availability of professionals,
- Opportunity to increase added value,
- Access to information.

As certain channels have higher expectations against their suppliers, these are available only to agricultural producers that can comply with these requirements. Access to larger quantities of products allows marketing through several channels, decreases risks and maximises the business opportunities (Shaw and Gibbs, 1996).

According to the Spanish Intercitrus (Interprofesional Citricola Española), changes in the following fields are necessary for the sake of the Spanish citrus sector's reorganisation:

- Analysing the demand and offer conditions within the sector,
- Assisting producers in reacting adequately to the changes in demand,

- Development of different systems to improve or to maintain the quality of produce,
- Encouraging contractual relationships,
- Acting as representative of the citrus sector,
- Strengthening research and development in production, distribution, processing and marketing,
- Expediting marketing and advertisement campaigns,
- Discussions on a plan of action, with the aim of increasing the producers' income.

According to the organisation, none of these measures can be implemented if the number of citrus producers does not decrease to leave some large companies, conglomerates or organisations representing the majority of the citrus production.

Although producer organisations are usually the most successful in the co-operation with retail food chains, there are also several producer organisations which are unable to become efficient market participants. The factors that may cause deficiencies in the organisations' operation are outlined below:

- Lack of well-defined objectives,
- Assertion of the individual interests instead of the common interest,
- Lacking transparency of the knowledge and information among partners,
- Inequalities among partners,
- Lack of realistic development plans,
- Lack of enterprising skills,
- Too much focus on the produce, instead of paying attention to services.

Bijman and Hendrikse (2003) have identified the following reasons:

- The collective ownership does not encourage members to invest,
- The collective decision-making has its disadvantages,
- Inelasticity of the organisation,
- The majority decides the policy to be followed by the organisations and the minority has to accept these decisions.

By eliminating these problems, and through introduction of competitive and efficient production methods and increasing the added value of the products, the role of the production organisations may further increase in the supplies to the food retail chains.

In Hungary, the producer organisations are not still as common in the fruit and vegetable sector as in the EU. This is one of the basic reasons for the small-scale fruit and vegetable producers' difficulties in the field of supplies. The differences between successful countries and Hungary are due to the fact that in Hungary the rate of the black sector is high and this does not encourage the domestic small-scale fruit and vegetable producers to adapt. On the other hand, the state does not efficiently encourage a decrease of the black sector and sales through the producer organisations, furthermore the provision of the product path functions connected to the logistic systems of the food retail trade chains.

As our domestic assessment has demonstrated, the multinational and domestic food retail chains mainly consider the POs as suitable partners. POs adapting themselves to the chains' purchasing strategy may usually become suppliers. The problem lies in the fact that some of the POs wish to produce a large variety of fruits and vegetables, while the chains principally need specialised POs, supplying three to five products in large quantities, instead of POs supplying a large product range. In the latter case, POs cannot be competitive as regards quantities, quality and price.

Our domestic assessments demonstrated that there are still several conflicts in the relationship between the POs and their members. This is due to the fact that – in the hope of higher profits and immediate payment – producers sell their products outside the POs in a higher proportion than allowed. POs should further develop in the following areas:

- Developing their own image,
- Strengthening specialisation,
- Better emphasising the regional or local origin of their products.

The selection process is still under way amongst them. On the basis of their prospects, they can be categorised as follows:

- Winners, operating already well and developing;
- “Sufferers” – these will disappear;
- “Where nothing is yet decided”. They could develop into prospective POs because they have the capabilities but are unable to take benefit thereof, or lack proper professionals (logistic or commercial experts), or are unable to co-ordinate the production of their members.

Conclusions

It is a trend observed both in the food retail trade within the European Union and in Hungary that large floor-space hyper- and supermarkets and discount stores operated by large food retail chains are making headway and obtaining leading market positions. Direct supplies by small-scale producers to the multinational food retail chains have future prospects only in the field of special niche market products. In this product category, the Hungarian small-scale producers are still supplying to the large retail chains in smaller quantities than their Western European companions and remaining below their possibilities. Direct supplies by small-scale producers may be more important in the case of the domestic food retail chains, where the rate of small and medium-size shops is more important and purchases are not centralised.

Due to the large quantities of homogeneous quality products, the producer organisations integrating small-scale producers may become successful suppliers of the retail chains. In Hungary, the producer organisations in the fruit and vegetable sector still do not have the same role in supplying food retail chains as those in the European Union. Many of the domestic small-scale producers may principally become suppliers through joining similar organisations. POs may have a distinguished role in increasing supplies to the large food retail chains among the different producer organisations.

To increase sales, the domestic small-scale producers must adapt themselves to the requirements of the food retail chains both in the field of niche market products supplied directly and in the case of large quantity products of homogeneous quality supplied through the producer organisations. They should change their mentality and approach, increase their adaptation, improvement and marketing-oriented innovation abilities. The state, on the other part, should grant assistance in mitigating the lack on capital due to the small-scale production and support more efficiently the increasing role of the different producer organisations, especially of the POs.

Acknowledgements

The study has been prepared under the Hungarian Scientific Research Fund’s programme K67739 – “Marketing-oriented adaptation of small-scale agricultural producers to the trade concentration process in the fruit and vegetable sector”.

References

1. **Beamer**, B. G. (1999): How to Sell Fresh Produce to Supermarket Chains? Virginia Tech. Department of Agricultural and Applied Economics.
2. **Bijman**, J. and **Hendrikse**, G. (2003): Co-operatives in chains: institutional restructuring in the Dutch fruit and vegetables industry. Erasmus Research Institute of Management. Report Series. Research in Management. <http://www.irim.eur.nl>.
3. **Dries**, L., **Reardon**, T. and **Swinnen**, F. M. (2004): The Rapid Rise of Supermarkets in Central and Eastern Europe: Implication for the Agrifood Sector and Rural Development. Development Policy Review. 22 (5): 525-556.
4. **Erdész**, F.-né (1994): Az EU-csatlakozás hatása a zöldség- és gyümölcságazatra. (The Influence of the EU Accession on the Hungarian Fruit and Vegetable Sector). In: EU Tanulmányok V. Integrációs és Fejlesztéspolitikai Munkacsoport. 144-151.
5. **Fertő**, I. and **Szabó**, G. G. (2004): Értékesítési csatornák választása a magyar zöldség-gyümölcs szektorban (Marketing Channels in the Hungarian Fruit and Vegetable Sector). Közgazdasági Szemle, LI. (január): 77-89.
6. **FORFÁS** (National Policy Advisory Body for Enterprise and Science, Ireland) (1999): The Dynamics of the Retail Sector in Ireland. Report prepared for FORFÁS by: KPMG Management Consultants, Fitzpatrick Associates Economic Consultants. The Centre for Retail Studies, University College Dublin.
7. **Kürti**, A., **Kozak**, A., **Seres**, A. and **Szabó** M. (2009): Mezőgazdasági kisárutermelők nagy kereskedelmi láncoknak történő beszállítása a nagyvevői igények alapján a zöldség-gyümölcs ágazatban (The Supply Practices of Small Scale Producers of Fruits and Vegetables concerning the demand of the Food Chains). MTA Közgazdaságtudományi Intézet kiadványa. MT-DP – 2009/7. (<http://econ.core.hu> – Publikációk – Műhelytanulmányok – 2009).
8. **Juhász**, A., **Kürti**, A., **Seres**, A. and **Stauder**, M. (2008a): A kereskedelem koncentrációjának hatása a kisárutermelésre és a zöldség-gyümölcs kisárutermelők alkalmazkodása (The Impact of the Concentration of Commerce on the Small Scale Producers of Fruits and Vegetables). MTA Közgazdaságtudományi Intézet kiadványa. MT-DP – 2008/2. (<http://econ.core.hu> – Publikációk – Műhelytanulmányok – 2008).
9. **Juhász**, A., **Seres**, A., and **Stauder**, M. (2008b): Business concentration in the Hungarian food retail market. Studies in Agricultural Economics No. 108. 67-79.
10. **Kohls**, R.L. and **Uhl**, J.N. (1990): Marketing of Agricultural Products. New York: MacMillan Publishing Company.
11. **Lehota**, J. and **Tomcsányi**, P (1994): Agrármarketing (Agricultural Marketing). Budapest: Mezőgazda Kiadó.
12. **Lehota**, J. and **Fehér**, I. (2007): Borexport marketing (Wine Export Marketing). Szent István Egyetem, Gazdaság- és Társadalomtudományi Kar, Marketing Intézet.
13. **Lentz**, W. (2004): Changing market Channels for Fresh Fruits and vegetables and Implications for the structure of the Farm Sector. Acta Horticulturae 665: 63-67.

14. **Local farmers pilot fresh food in supermarket trial** (2006). http://www.amsltdgroup.com/15_detailNews_ASDA_strawberries_potatoes_fresh-cabbages_fresh-cauliflower_broccoli_greens_leeks_fresh-local-food.html.
15. **Metro Goup** (2005): Metro Group introduces new private label 'Cali' for fruits and vegetables. <http://www.metrogroup.de/servlet/PB/menu/1013941-12/index.htm>.
16. **Meulenberg, M.** (1993): Food and Agrobusiness Marketing in Europe. London: The Hawort Press, Inc.
17. **Planer, B.** (2004): Slowly But Surely, Discount Stores Spread Across Europe. Planet Retail, <http://planetfoodservice.net>.
18. **Revista Mercados** (2007): Supermarkets must worry about profitability for growers. www.revistamercados.com.
19. **Shaw, S. A. and Gibbs, J.** (1996): The role of marketing channels in the determination of horizontal market structure: the case of fruit and vegetable marketing by British growers. *International Review of Retail, Distribution and Consumer Research* 6 (3):281-300.
20. **Szakály, Z., Szigeti, O. and Szente, V.** (1994): Hagyományos magyar termékek marketing-lehetőségeinek elemzése a vidékfejlesztés szempontjainak figyelembevételével. In: Inotai, A. (szerk.) (1994): EU Tanulmányok V. Integrációs és Fejlesztéspolitikai Munkacsoport.
21. Van der **Meer, K.** (2004): Demand-driven Agriculture Development. WB-CEI-FAO Workshop on Agriculture, Agribusiness and the Retail Sector in South-East Europe. Sarajevo, 24-27 May, 2004.
22. **Verdict** (2008): European Grocery Retailing 2007. <http://www.verdict.co.uk>.
23. **Wirthgen, A.** (2004): Co-operating in Vertical Marketing Systems to Ensure Regional Product Quality. *Acta Horticulturae* 655: 33-39.
24. **Wu Huang, S.** (2004): Global Trade Patterns in Fruit and Vegetables, Electronic Outlook Report from the Economic Research Service, USDA, WRS 04-06, www.ers.usda.gov.
25. **ZMP** (2006): Obst Marktbilanz 2006.
26. **Z. Kiss, L.** (2003): Az integráció típusai a zöldség-gyümölcs szektorban. In: Z. Kiss, L. (szerk.): A gyümölcsstermesztés, -tárolás, -értékesítés szervezése és ökonomiája. Mezőgazda Kiadó.