

GLOBAL, REGIONAL AND LOCAL CHALLENGES IN HUNGARIAN AGRICULTURE

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The article discusses the main challenges and possibilities faced by the Hungarian agricultural sector, in light of developments on global agricultural markets, EU-membership, and other issues. Global developments, such as the accelerated development of agricultural technology, shifting structure of demand and the restructuring of international agricultural trade, the reform of the EU's Common Agricultural Policy and the increasing social tensions in rural Hungary have far-reaching impacts on the conditions affecting the operation of Hungarian agriculture, and definitely require a change in our thinking. The article provides certain recommendations for Hungarian agricultural policies: (1) the diversity of farms should be taken into consideration; (2) rapid technological development based on scientific results must be made a priority; (3) a higher level of coordination between the state and the private sector is required; (4) a new type of synthesis between agriculture and rural areas must be created; and (5) physical and social infrastructure in rural areas must be developed.

Keywords: Hungary, agriculture, rural development, global challenges

Journal of Economic Literature (JEL) code: Q10

INTRODUCTION

Hungarian agriculture has left behind two hard decades. The reforms connected with the transition, the change in the ownership and the zigzags of the agricultural policy made it difficult for Hungarian agriculture to adapt to the changing international environment and to prepare for the new requirements resulting from the EU membership. Recent developments have indicated a new turning point in the history of the international and Hungarian agriculture. The performance of our agri-

culture is undoubtedly lagging behind the opportunities provided by both our natural resources and the international market; however, based on its potential and traditions, agriculture can remain an extremely important sector of our economy, as well as the determining factor of rural development in Hungary. Nevertheless, agriculture will be able to fill that part only in the case that the players of the agricultural sphere understand the development tendencies of the surrounding world and they are capable of taking concerted and rational actions in crucial issues affecting the future. In my lecture I am going to present an overview of the global and regional tendencies as well as the domestic situation, while drawing attention to a few things that should be done because they are of key importance for the future.

1. RAPIDLY CHANGING GLOBAL ENVIRONMENT

The future of Hungarian agriculture and the welfare of the producers, the welfare of the whole Hungarian countryside in a broader sense, are closely connected to the global trends of agricultural development. In many aspects the 21st century marks the outset of a new era in agriculture as well. The accelerated development of agricultural technology, globalization, the restructuring of international agricultural trade accompanied by the developments of the recent past (food price explosion, bio-energy production) and the increasing social tension in rural Hungary have far-reaching impacts on the conditions affecting the operation of Hungarian agriculture, and definitely require a change in our thinking.

Regarding world agriculture, the past two decades brought about a balanced development. The annual growth rate was slightly over 2%. The agricultural production per capita also showed a steady growth. This growth was remarkably fast in the developing countries. Between 1970 and 2004 the agricultural production per capita grew by 60% in developing countries, while it was 25% on the world scale. In the same period of time there was a moderate growth of about 10% in the production per capita in the developed world. However, there are exceptionally big regional differences beyond the rapid growth of agricultural production typical of all developing countries. The agricultural production per capita nearly doubled in the Asian and the Pacific areas between 1970 and 2004. There was a relatively moderate growth in the Middle-East and in North Africa. However, in the Sub-Saharan African countries the level of production per capita has stagnated for the last 20 years (*Figure 1*). It is very sad that despite the fact that the agricultural production per capita has grown more rapidly than the population of the world, the number of starving people has not dropped significantly. According to data issued by the FAO, the size of the undernourished population was around 925 million people in 2007.

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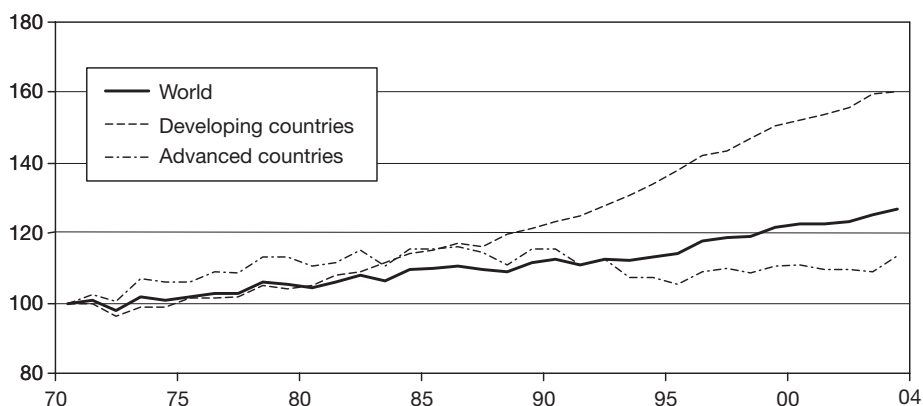


Figure 1. Changes in food production per capita (1970 = 100)

Source: FAO 2006.

Global demand should be mentioned as the primary factor shaping future tendencies. Nowadays the change in demand includes several new elements: changing demand on the one hand and significantly modified regional distribution on the other. The growth in demand for cereals continues to be remarkable, although the rate of development is gradually decreasing. Regarding cereals, besides the production for human consumption, there is an increasing need for animal feed and raw materials for bio-energy production. The demand for food on behalf of the emerging middle-class in the rapidly growing cities of the developing world – primarily in South and East Asia, already amounting to several 100 million people today – is different from the traditional food demands of the poorer countries. As a result of this, the demand for food including vegetables, fruit and animal products, has considerably risen in the Asian countries (*Figure 2*).

It is not by chance that a revolution in animal breeding seems evident in the developing world (FAO 2003). The meat and milk consumption in the developing countries will nearly double within two decades, while the estimated growth in the developed world is merely about 10% (*Table 1*).

The prices of agricultural products on the international markets sharply rose a few years ago. Earlier a falling trend in the relative prices of agricultural products had been dominant for several decades. This tendency came to an end in 2007 and since then a great increase in the relative prices of almost all products has been observed (*Figure 3*). The explosion of agricultural prices has been the result of the joint effect of several factors. Among them long-lasting effects are the most prominent, such as Asian demand, the increasing costs generated by growing demand for primary commodities for bio-energy production and the fast increase in energy

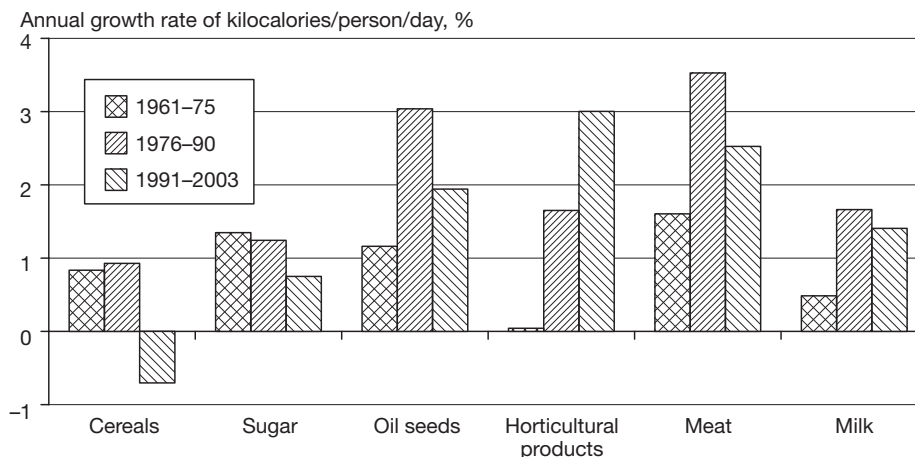


Figure 2. Changing trends in food consumption in the developing countries
Annual growth rate, kilocalories/person/day (%)

Source: FAO 2006a.

Table 1

Trends in meat and milk consumption

Region	Consumption million tons		
	1983	1997	2020
Developed countries			
cattle	32	30	34
swine	34	36	39
poultry	19	28	38
all meat	88	99	114
milk	233	254	276
Developing countries			
cattle	16	27	52
swine	20	46	80
poultry	10	29	67
all meat	50	112	213
milk	122	198	372

Source: Scones – Miranowski (2004).

prices, as well as the decreasing amount of land used for agricultural production. The impacts of the constant factors causing rise in prices have been enlarged by unfavorable weather conditions, the decreased level of stocks, government panic in many countries (export ban, new export tariffs) as well as by speculation. The increased food prices have contributed to the unexpected growth of inflation worldwide and have seriously affected the poor of the developing countries.

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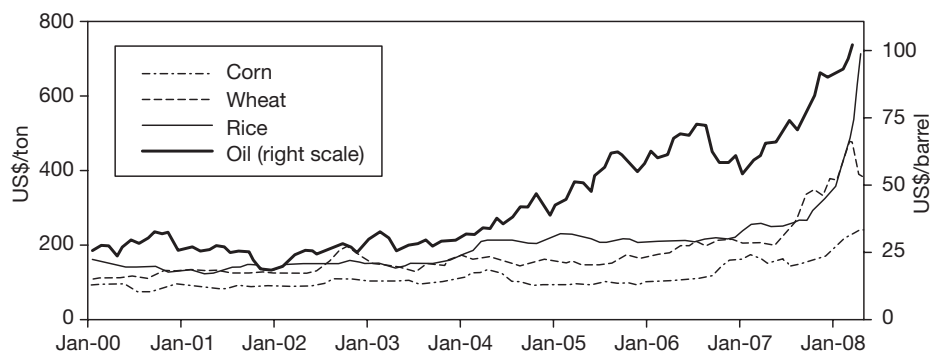


Figure 3. Price explosion: prices of oil and agricultural products on the world market

Source: FAO international commodity sources database 2008 and IMF World Economic Outlook database April 2008.

Nowadays the fast increase in prices has already stopped, so we can rather speak about decreasing prices and falling trends. Nevertheless, the effects of the above-mentioned lasting trends should be considered, although the favorable yield prospects will have an easing effect anyhow. The majority of estimations regarding product prices forecast a price level that is higher than it was in the previous years, and they continue to count on a moderate rise in the relative prices of agricultural products. All this is likely to be accompanied by large-scale fluctuation of agricultural prices on the world market following the energy market trends, mainly in the case of cereals.

One of the most characteristic changes of the past decade was the emergence and the growing importance of the *integrated vertical product lines*. This phenomenon was coupled with the accelerating and ever growing concentration of *trade in food* and the large expansion of super- and hypermarket chains (Csáki et al. 2008). Food processing and trade in food are integrating the entire process of food production and consumption from the production of raw materials to the end consumer. Nowadays the journey of foodstuffs from the field to the consumer's table is covered by integrated systems, in which the demands and standards of the processing and commercial chains are the most important. At the higher level of economic development – as seen in *Figure 4* – the concentration of trade in food and the role of the super- and hypermarkets are especially powerful. In the most developed countries the supermarkets dominate 80–90% of the food markets. This tendency is progressing very fast in Central-Eastern Europe as well. The five leading commercial chains are responsible for more than two-thirds of the total food turnover in Hungary, and half of total food turnover in Poland. The mostly multinational commercial chains trading in food have procurement systems of

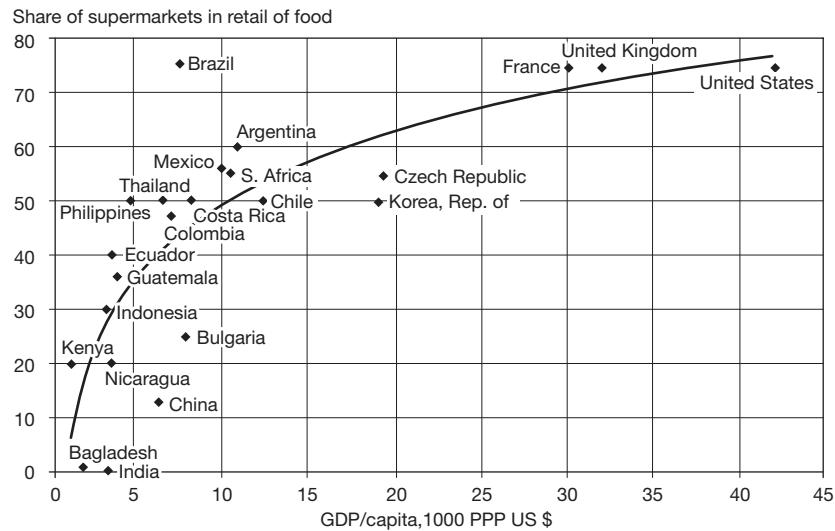


Figure 4. "Retail revolution": Growing concentration in trade in food
The share of supermarkets in trade in food (%)

Source: Reardon and Berdegue 2006; World Bank 2006.

Note: GDP/capita, 1000 PPP US \$

their own, and operate their special payment and incentive methods that basically restructure the traditional agricultural markets and the balance of market forces.

The restructuring of trade in food has resulted in the *growing market orientation* of agricultural production (and agricultural producers) and the establishment of new forms of relations between primary agricultural production and the markets. The changing demand has brought along a gradually increasing level of integration of national and international markets. As a result of this, the traditional quantitative approach to agricultural production was replaced by a revenue-centered "production for the market" orientation. The players of agricultural production can become effective only if they think in terms of the complete food chain (Reardon et al. 2003). At the same time a closer integration is being developed not only in relation to the products but to the means of production as well. In agricultural production the role of the traditionally decisive human labor has been profoundly changing, too. In terms of human labor as the direct factor of the production process, there is a gradual shift from the physical strength to the ability in organizing and managing production, thus making the qualitative aspect of human participation the determinant one. Producers' decisions are being increasingly adjusted to the market, which is leading to the specialization of the production at the level of individual farms, while resulting in the diversification of production at the regional level.

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The changing criteria and sweeping globalization have caused essential changes and shifts in emphasis in the technology of agricultural production itself and in its structure alike, and this process seems to be continuing in the future. The *rapid growth in the scale of production* – in parallel with the intensification of market relations – is a very important new feature that is primarily seen in animal husbandry (Table 2). The large size industrial-like stock-yards provide for a growing rate of poultry, egg and pork production (Table 2). The tendencies are also similar in milk production, although the growth is not as remarkable as in the two above-mentioned fields (De Haen et al. 2003). Modern industrial animal breeding technologies are easily applicable in different parts of the world, essentially reshaping the traditional image of animal husbandry. However, the development of animal breeding technologies creates an increasingly difficult situation for small farms and family farms. Recent analyses and projections have made it evident that producers can survive in the market competition provided they are able to considerably increase their production scales in the poultry and the swine sectors, and even in milk production.

Table 2

The role of animal husbandry systems (%)

Product	Pasturage	Traditional animal keeping	Large-scale animal keeping
Meat			
Cattle	23	65	12
Sheep	30	69	1
Swine	1	60	39
Poultry	2	24	74
Milk	8	91	1
Egg	1	31	68

Source: Csáki 2007.

Rapid technological development utilizing scientific achievements is an important feature of global agriculture. In agriculture there is a worldwide need for the development of production methods that can facilitate the significant increase in specific yields without damaging the environment and relying on a narrowing natural resource base. These are extremely great challenges for agricultural, biological and ecological sciences. In order to satisfy future needs, it is not sufficient to increase the productivity of individual products, but the increase of overall productivity, and last but not least, the quality improvement of the complex agricultural production systems is required. Biotechnology is one of the most important means of developing new technologies, as well as the improvement of plants built

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on it, which results in the appearance of genetically modified (GM) species. There are heated debates – especially in Europe – about the application and the role of these species. Several countries, including Hungary, limit the use of these species although there is a sweeping expansion of GM species worldwide (Bánáti – Popp – Potori 2007). As seen in *Figure 3*, in the case of some plant species (e.g. soy and cotton) the proportion of land used for GM varieties is already extremely large (in 2006: 63.4% and 40.1%) and the proportions have been increasing year by year (*Table 3*).

Table 3

Area of GM plants in the world (2005–2006)

Plant	2005			2006		
	Total area million hectare	GM species		Total area million hectare	GM species	
		area million hectare	Proportion %		area million hectare	Proportion %
Soy	93.4	54.4	58.2	92.4	58.6	63.4
Corn	144.7	21.2	14.7	145.6	25.2	17.3
Cotton	34.6	9.8	28.3	33.4	13.4	40.1
Rape	26.8	4.6	17.2	27.4	4.8	17.5

Source: Bánáti – Popp – Potori 2007.

The traditional thesis of agricultural economy is the negative correlation between productivity and economic scales. The advantage of small farms regarding efficiency under the conditions of traditional farming is beyond doubt (Eastwood et al. 2005). The higher productivity of family work and the lower management costs of smaller farms generally compensated for the advantages derived from the more developed technology of bigger farms. However, it is becoming more and more *problematic whether or not small-scale family farming is capable of maintaining these advantages of efficiency* under the conditions of the integrated agricultural markets. The transaction costs of participation on the integrated markets seem to exceed the advantages of efficiency stemming from the smaller sizes (Pingali 2006). Therefore, the changing agricultural markets raise the issue of reviewing the traditional theses, and they will require an essentially new approach in relation to smaller producers and family farms. Experience shows that smaller producers will be able to survive in the long run only in the case of unified and organized actions on the markets.

The *decreasing competitiveness of disadvantaged and marginal areas* is an important new tendency. Disadvantaged circumstances can derive from the poor soil quality, unfavorable agro-climatic conditions or the geographical situation alike. Owing to the expanding international trade and decreasing transport costs,

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in several consumer centers of the developing world the import of food is getting cheaper and technically easier than the utilization of the disadvantaged home production. All this has an unfavorable impact on local production, seriously affecting the market opportunities of small producers in particular.

The growing demand for the primary materials of bio-energy production is also a new development. Shrinking reserves of fossil fuels and their rapidly rising prices have revalued the opportunities of energy production hidden in agriculture. Besides biomass, oil-producing plants and cereals – mainly corn and rapeseed – are increasingly considered as primary materials of energy production. Nowadays the volume of bio-fuel production – especially in developing countries – is significant (*Table 4*).

Table 4
Costs of bio-ethanol and bio-diesel production USD/liter (2007)

Country	Bio-ethanol	Bio-diesel
Brazil	0.33–0.35	0.50–0.90
USA	0.36–0.40	0.65–0.70
EU	0.80–0.85	0.90–1.10
China	0.45–0.55	–
India	0.65–0.70	–

Source: Popp 2007.

The USA and the European Union have forecasted a fast increase in bio-fuel production. In the USA emphasis is given to the production of bio-ethanol, while in the European Union priority is given to the production of bio-diesel. Today bio-fuel production is a growing rival to food production and it also has had an important role in the recent food price explosion. Nevertheless, bio-energy production is still the opportunity of the future, and further analyses are required to prove its economic efficiency and environmental effects, as the economic competitiveness of the present technologies is primarily undergirded by subsidies. The production costs of bio-fuels are to a great extent influenced by the primary materials used. Besides the currently applied technologies, the production costs are especially high in the European Union (*Table 5*). However, the need for primary materials in bio-energy production will undoubtedly become one of the factors determining the demand for agriculture already in the near future, especially with the development of more efficient technologies (Popp 2007).

Within the framework of global standards we should not neglect the influence exerted on production by agricultural policy and the institutional environment. Changes in the national agricultural policies foreshadow the further liberalization of agricultural markets. The outcome of WTO negotiations will considerably af-

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Table 5
Increasing role of bio-fuel production cereal production and utilisation, 2007/2005

	Change	
	Million tons	%
Production		
World	46	103
Utilisation		
World	80	105
OECD	53	107
Non-OECD	27	103
Share of bio-fuel	47	203

Source: Popp 2007.

fect agricultural and trade policy in the developing and the developed world alike. Although the WTO talks have not brought definite results yet, the further liberalization of markets seems probable in the medium term. This will make it easier for developing countries to place their products on the market, thereby generating competition worldwide and in developed countries as well. All in all we have to reckon with the restructuring of the traditional systems of the allocation of agricultural subsidies in the OECD countries. These changes will necessitate considerable adaptation on behalf of producers in the developed countries.

In the coming years, *environmental problems in agricultural production will likely occur more frequently and be of a more serious nature*. Increased efforts are needed to mitigate the harmful environmental impacts of the intensive agricultural production systems. According to several analysts, environmentally sustainable agricultural production is becoming a more and more serious challenge. Though there is no cause for sounding the alarm, it must be acknowledged that – besides the current agricultural technologies – deteriorating soil quality and gradually dwindling water sources will put a significant drag on the global growth of agricultural production. All of this will be intensified by global climate change and its not yet predictable negative effects.

Environmental problems are especially serious in certain parts of the developing world, where due to farming practices of the growing population, the harmony of the natural environment has been violated. The majority of grasslands have been deteriorating quickly, mostly in the semi-desert areas. Due to industrialization, urban development and erosion the size of arable land is continuously decreasing. In China, for example, one million hectares of land are withdrawn from cultivation each year. The amount of water available for irrigation is becoming increasingly scarce. It is presumed that the negative impacts of global warming will mostly hit the tropical areas, i.e. the developing world in particular. Therefore,

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there is a growing need for the development of environment-friendly technologies, and the more efficient implementation of the requirements of sustainable agricultural development.

2. THE CHANGES OF EUROPEAN AGRICULTURE AND AGRICULTURAL POLICY

The prospects and troubles of Hungarian agriculture are inseparable from global tendencies and the developments expected in the European Union. I will seek to analyze the performance of European agriculture as a whole and the expected changes in the common agricultural policy in a regional context.

Agriculture in the European Union is one of the most developed in the world and has a determining role on the international market of agricultural products. While ensuring a high level of self-sufficiency, the 15 old Member States of the EU represent one of the largest food importing areas of the world. However, the joint effect of the subsidies provided by the Common Agricultural Policy (CAP), the introduction of the concept of multifunctional agriculture into practice and the high level of market protection seem to have resulted in the decreasing competitiveness of European agriculture.

During the past 25 years, the European Union's share in the world production of wheat has decreased from 13% to 11%, from 26% to 15% in the production of meat, and from 19% to 10% in the production of vegetables. While in the 1980s an American farmer produced only twice as much added value as his European counterpart, in 2006 an American farmer produced nearly four times more added value than a European farmer. Since the millennium the agricultural external trade balance of the EU has been characterized by falling assets, in some cases (2004) even liabilities (*Figure 5*). Even with the increasing subsidies (55 billion Euros in 2007) 160 thousand workplaces in the agricultural sector were terminated annually in the EU-15 between 1995 and 2006.

The CAP was launched 50 years ago. Despite the continuous amendments, it has become one of the most controversial instruments of the Union's economic policy. However, behind the critical rhetoric it is widely accepted that the CAP has achieved its original objectives. The income of EU farmers is stable and high and the European Union has achieved a high level of self-sufficient food production. Although the reforms of the past decades restructured the CAP system, its income supportive and protectionist character did not change during the years. Multi-functionality, decoupling, i.e. the separation of income support from production and rural development, are in the focus of the present concept that is being supplemented by the aspects of sustainable development, food safety, and animal

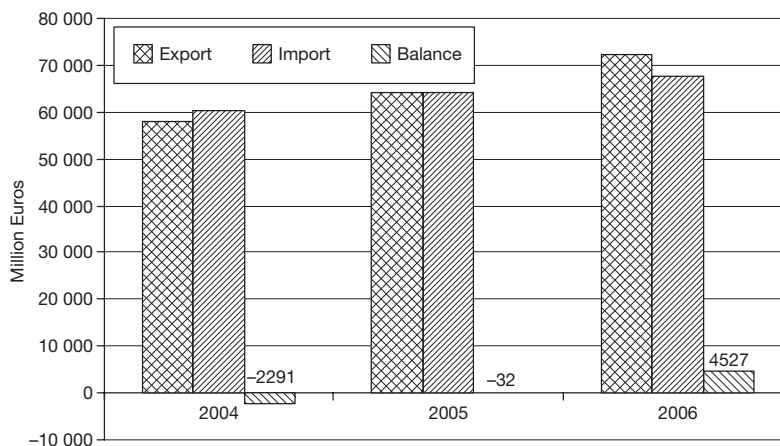


Figure 5. EU external agricultural trade balance

Source: Eurostat 2008.

protection as well as the new requirements of bio-energy production (Csáki 2008).

Nowadays the assessment (so-called health check) of the current system of the CAP is underway. Debates have been launched about the future reform of the CAP and about the details of the subsidy system after 2012. Although it is too early to speak about the decisions today, the main features of possible reform are being outlined. Its major characteristics are the following:

- Maintaining the priority of the principle of multi-functionality.
- Decreasing subsidies, and the growing role of national budgets concerning subsidies.
- Decoupling; increasing the rate of subsidies separated from production.
- More severe cross-compliance rules (e.g. the application of production technologies that take climate change into consideration).
- Increase the rate of subsidies for agricultural-environment management, and rural development at the expense of the Pillar I support fund.
- Cancelling the compulsory “set aside” rule.
- Gradual elimination of the milk quota system by 2015. Except for bread wheat the current market intervention system (cereals, butter, meat, etc.) will be abolished and replaced by ad hoc crisis management.
- Limitation of the amount of subsidies to be granted for individual farms. Degressive payments based on farm size and producer. (100 thousand Euros/farm size.)

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First it is worth examining whether the planned reform measures can improve the falling competitiveness of European agriculture, and if the planned agricultural reform of the Union offers an adequate response to the latest global changes. The answers to these questions are rather negative. It appears that the EU can only imagine the reforms if the principle of multi-functionality is maintained, therefore it does not intend to handle agriculture as a purely economic sector in the future either. This can result in a further fall in the competitiveness of European agriculture, as a stronger emphasis on environmental and animal protection issues will seriously raise the costs to farmers. The increasingly strict cross-compliance conditions will continue to worsen the competitiveness of EU producers in relation to other producers of the world. Research, education, consultancy have not become priorities yet, and handling critical elements of development (like GMO's) is also problematic.

There does not seem to be complete harmony between the planned reforms and the WTO negotiations, as well as between the broader perspectives of liberalization. Eventually the Union will be forced to significantly cut tariff levels and internal subsidies. It is questionable as to what extent the planned reforms will facilitate Union producers in adapting to the new circumstances preparing them for it. It is highly probable that a more determined opening of the market will increase competition inside the Union. Imports from countries outside the Union that produce more efficiently could rise dramatically. In this case the planned CAP reforms, primarily the decrease of the subsidies and their dependence on the national budgets could create a particularly serious situation in the 12 new Member States, where competitiveness in agriculture is weak, the number of agricultural employees is high and the opportunities of the national budgets are restricted.

Beyond the expected impacts of liberalization it is also worth seeking answers to the question as to what CAP reforms could be most beneficial for the new Member States, including Hungary. In principle in a more liberalized environment a simplified and lower level support system could be favorable for Hungary, as due to the available natural resources our potential efficiency is more favorable than in the majority of the EU Member States. However, today the utilization of the potential opportunities is set back by the technological backwardness of our agriculture and last but not least, by the significant differences in farmers' subsidies between the old and new Member States. Therefore we have no interest in a reform aiming at the decrease of subsidies, unless the current differences are completely eliminated. Because of the existing differences in the technical background, subsidies that foster investment in agricultural production in order to increase competitiveness are of primary importance for us in the future too.

It is also very important that the new system emerging as a result of the reforms should provide an appropriate framework for handling the special problems of the

new Member States, including Hungary. The present CAP model corresponds to the basically homogeneous circumstances of the EU-15 countries. Although the present model provides for the specialized treatment of certain fields, this model is not suitable for providing substantial assistance to the several million small farms operating in the new Member States, not to mention providing assistance with the problems of rural poverty which obviously goes beyond agriculture in a more narrow sense. Therefore, the interest of poorer countries – including Hungary – in maintaining a highly uniform CAP is questionable.

3. SOME FEATURES OF THE CURRENT SITUATION OF HUNGARIAN AGRICULTURE

The current situation of Hungarian agriculture can be expressed primarily by the deteriorating position of the national economy. In 2007, agriculture amounted to merely 3.6% of GDP, while 4.7% of employment was connected to this sector (*Table 6*). The scale of Hungarian agriculture and food production continues to be about 25% lower than the level it was at before the regime change. The volume of agricultural production was especially low in 2007, a mere 59.8% of the volume in 1980. The falling production trend is coupled with considerable fluctuations. In 2008, for example, the expected total amount of cereal crop production exceeded the amount of production in 2007 by more than 6 million tons, totaling around 16 million tones (*Figure 6*). Animal breeding, however, has seen an unusually steep and steady decline.

All of this has been accompanied by the loss of position in food production as well as the loss of both domestic and foreign markets. Since 2003 there has been a sharp decline in the share of domestic food production on the retail consumer market. While in 2007 the share of domestic food consumption was 78%, in 2010 the

Table 6

The position of agriculture in the national economy

Year	Share of agriculture in GDP (%)	Share of agriculture in employment (%)	Share of agriculture in investment (%)	Share of food industry in exports (%)
1996	5.8	8.3	3.5	18.4
2003	3.7	5.5	6.1	6.5
2004	4.1	5.3	4.3	6.0
2005	3.7	5.0	4.5	5.8
2006	3.7	4.9	4.2	5.5
2007	3.6	4.7	3.7	6.3

Source: Central Statistical Office (KSH) 2008.

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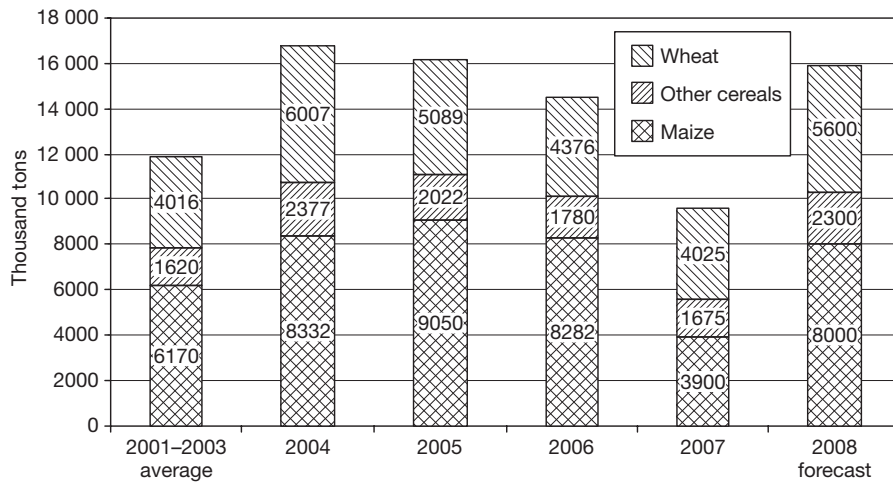


Figure 6. Volume of cereal crops

Source: Central Statistical Office (KSH) 2008.

expected share of food of foreign origin in domestic consumption is estimated to be 25% (Figure 7). Although agricultural exports in the years around 2000 markedly expanded (growth was approximately 2 billion Euros between 2000 and 2007), in parallel with this our food import more than doubled. The foreign trade balance of the food industry in 2006 decreased from one-and-a-half billion Euros to 994 million Euros (Figure 10), but in 2007 the positive balance exceeded one-and-a-half billion Euros once again, owing mainly to the sales of intervention

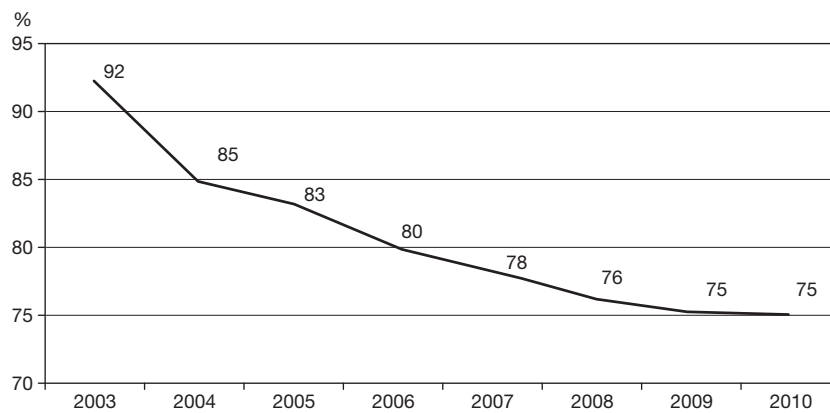


Figure 7. The Hungarian food industry's share on the domestic market

Source: AKI 2007.

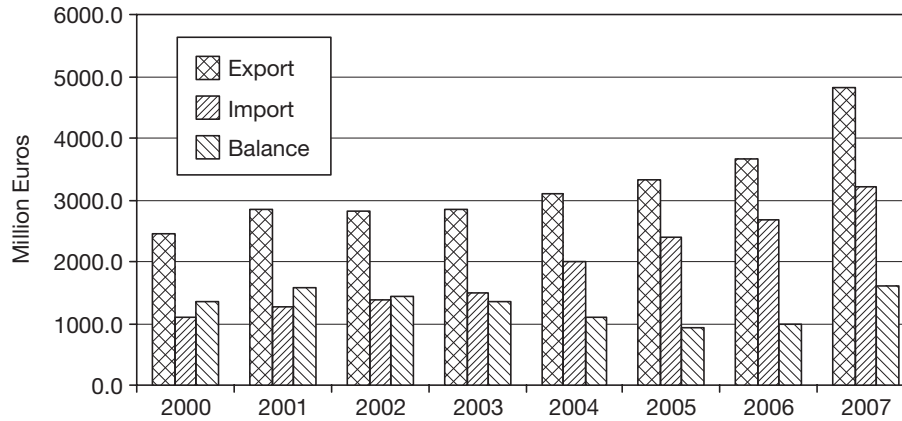


Figure 8. Relative market loss abroad

Source: Central Statistical Office (KSH) 2008.

stocks. Our negative performance is especially evident if we compare it with the relevant agricultural export data of the other new Member States.

Foreign trade performance indicators reveal that Hungarian agricultural production is becoming increasingly more restrictive and less competitive. Our backwardness in relation to the EU-15 has undoubtedly grown in terms of the average yields of the most important products (Figure 9). The specific yields of animal products continue to lag behind the Western European level. Our falling behind is also presented by the low level of production value per hectare. In 2004 Hungar-

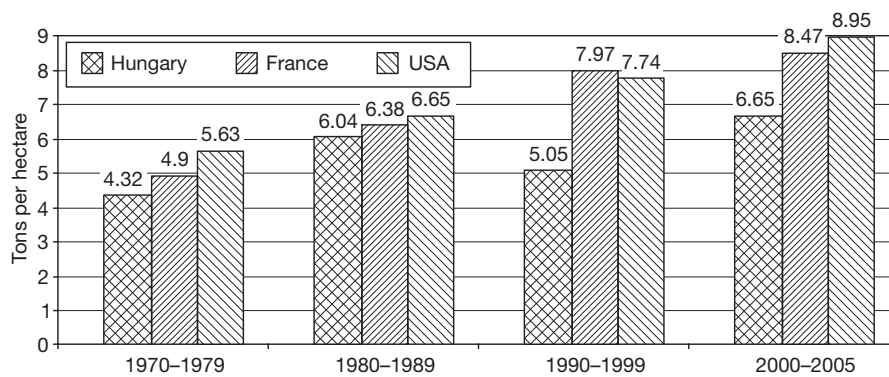


Figure 9. Corn yields

Source: Eurostat 2007.

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ian agriculture produced 1129 Euros of gross production value per hectare, while German agriculture produced 2145 Euros and Danish agriculture produced 2859 Euros of gross production value per hectare (*Figure 10*).

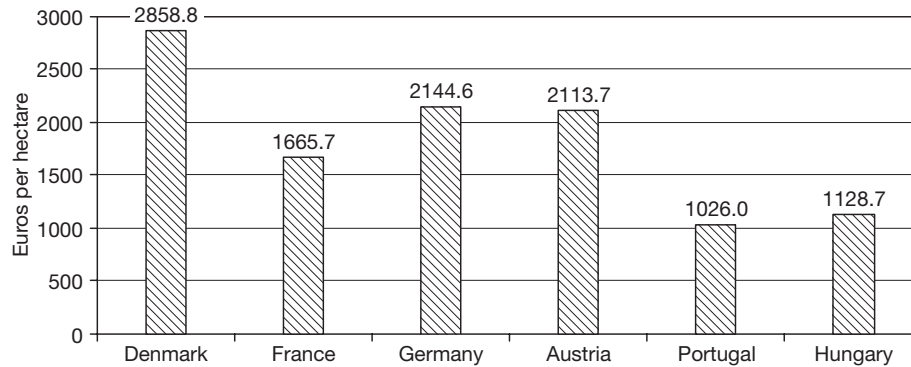


Figure 10. Gross added value 2004

Source: Eurostat 2006.

On the whole, the shift in the production structure of Hungarian agriculture towards extensive development has been an unfavorable change. The emphasis given to animal husbandry has significantly diminished in recent years. The share of the sector in the gross agricultural output in 2006 was merely 39.3%; in 2007 it was only 34.1% as opposed to a share of around 50% that was typical of the 1980s. This denotes an important change, as a result of which a significant share of smaller farms have given up animal husbandry and cereals have become the determining factors in their production structure. In the years from 2004–2005 there was a considerable amount of surplus in cereal crops in Hungary, indicating the fact that a portion of the farms expanded their grain production regardless of the actual market opportunities. In 2008 the surplus in cereal crops became a determining factor again. Despite the boom in the horticultural sectors, the extensive expansion was not compensated by the intensification of plant cultivation. A more extensive agricultural production undoubtedly offers fewer workplaces and lower income for the rural population (*Figure 11*).

The situation of agriculture can be described by further indicators too. From these we are exclusively focusing on the income related aspects of the sector. Agricultural production has persistently met with difficulties in terms of revenue and profitability. The long-term maintenance of the positive income balance in the sector has been ensured by the increased subsidies due to EU membership. The data in *Table 7* are worth looking at. According to them in 2006 Hungarian agri-

cultural producers received the highest direct subsidies per unit of land (SAPS + top up). This fact should in particular give pause for thought because, as has already been mentioned, the performance of Hungarian agriculture is lagging behind that of the other new Member States.

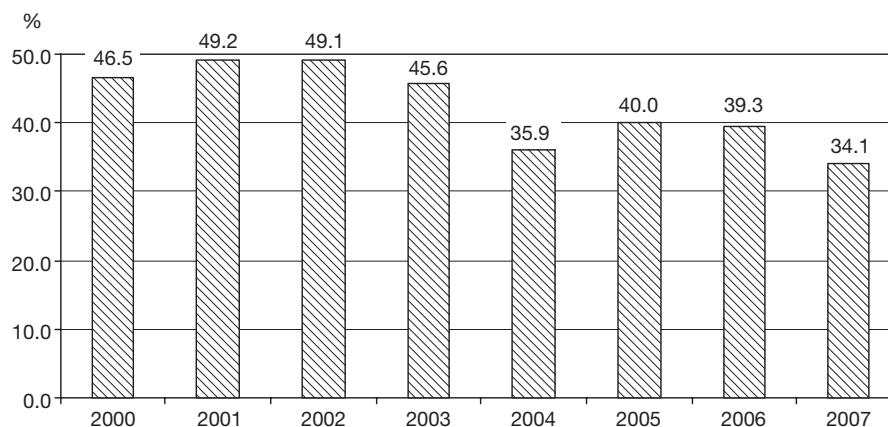


Figure 11. Extensive directional shift. The share of animal husbandry in the gross output of the agricultural sector in Hungary

Source: Central Statistical Office (KSH) 2008.

Table 7

Direct subsidies [SAPS + top up*]/ha, Euros per hectare

Member State	Ref.	2004	2005	2006	2007	2008	2009	2010	2011–2013
	yield t/ha								
Czech Republic	4.20	145.7	159.0	172.2	185.5	212.0	238.5	265	265
Hungary	4.73	149.5	161.0	174.3	208.6	238.4	268.2	298	298
Poland	3.00	104.0	113.4	122.9	132.3	151.2	170.1	189	189
Slovakia	4.06	140.8	153.6	166.4	179.2	204.8	230.4	256	256
EU-10	4.00**	138.6	151.2	163.8	176.4	201.6	226.8	252	252
EU-15	4.77	300.5	300.5	300.5	300.5	300.5	300.5	300.5	300.5
EU-10/EU-15, %	83.8	46.1	50.3	54.5	58.7	67.1	75.5	83.8	83.8

* top up: from national budget

** estimate

Source: DG AGRI, Country Reports.

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4. PROBLEMS AND TENSIONS

The current worries and problems of Hungarian agriculture largely stem from the Hungarian agricultural policy of the past two decades. The transition in agriculture – the necessity of which is beyond doubt – took part as a politically managed process in which aspects of economic rationalism played at most a secondary role. Successive governments pursued short-term agricultural policies focusing on the upcoming elections. They did not develop an agricultural strategy built on a wider consensus that could have been a basis for the preparation for the new circumstances created by the EU accession. Agriculture was highly subsidized even in the pre-accession period. This support policy, however, did not place the improvement of competitiveness and efficiency in the centre. A significant part of the enormous amount of subsidies was distributed in the form of market and income support; consequently, it did not serve the development of production bases and technologies determining competitiveness. In the period directly preceding the accession, the development of the infrastructure needed for the operation of the common agricultural policy was considerably delayed, among them the implementation of the SAPARD program. Resulting from these circumstances it can be stated that among the new Member States, Hungary's agriculture was one of the least prepared for EU membership.

Due to the changes of the last two decades a dual economic structure was created, with the extreme fragmentation of land property. Farms with sizes over 50 hectares amount to 1.3% of the total number of farms, but use 40% of the land. In addition to the 4–5 thousand large-scale farms there are about 20–30 thousand consolidated family farms. The estimated number of small farms is 180 thousand.

These are augmented by roughly 700 thousand households registered as farms on less than 2–3 hectares of land each. The majority of large-scale farms operate on rented land, and most of them struggle with efficiency problems inherited from an earlier period of large-scale farming, as well as the constant lack of capital. The lack of capital is also typical of family farms. The 180 thousand small farms are struggling for survival in a quite disintegrated manner, practically being left on their own. The majority of the 700 thousand households produce for their own consumption, and are unable to integrate themselves into the restructuring agricultural markets. This structure is absolutely unfavorable in terms of competitiveness and efficiency.

One of the most serious problems of the present Hungarian agricultural world is the inability to adapt to the changed market conditions. As mentioned earlier, the markets of agricultural products underwent revolutionary changes during the past decades. The emergence of multinational food processing and commercial firms, the expansion of super- and hypermarkets created new conditions and re-

quirements for agricultural producers. In this situation the cooperation and concerted efforts of producers are necessary for the sale of their products so that they can avoid being at the mercy of the integrated markets. The required adaptation is not easy for large-scale farms either, although owing to their larger sizes they have a somewhat more favorable position. However, without some sort of marketing cooperation and rallying of their forces, the situation of small producers is almost hopeless. Unfortunately, cooperation among agricultural producers is still at a minimum level (as seen in *Figure 12*), even in relation to the new Member States. In the EU, average 33.7% of products are put on the market from smaller farms with the involvement of sales organizations of producers, while in 2006 this rate in Hungary was less than 5%.

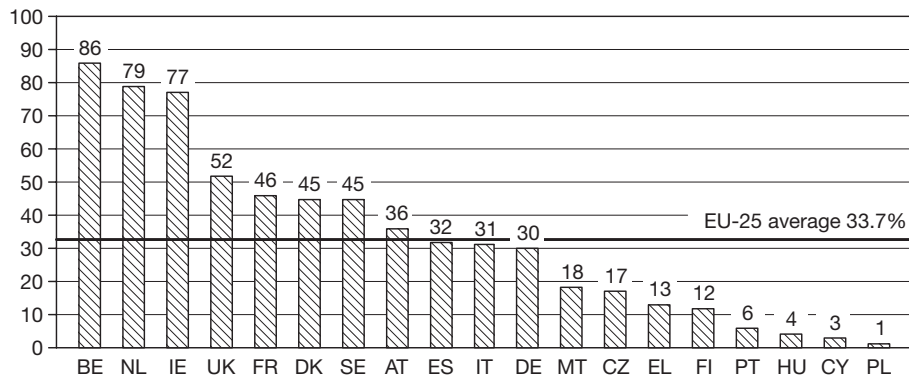


Figure 12. The share of products sold by co-operatives, %

Source: Eurostat 2006.

In the current situation the specific development of Hungarian agricultural production can be a reason for anxiety. As we have already mentioned, there is an evident shift in demand on global markets to products that require more intensive farming, primarily animal products and horticultural products, and beyond these even to high quality and biologically clean products. However, in Hungary animal breeding continues to decline, which is unfavorable for rural employment, and the development of more intensive plant cultivation is also slow. At the same time the expansion of the production of primary materials of bio-energy production is almost euphoric. No doubt, it is an important European strategic objective to increase the market share of bio-energy, and it is undoubtedly a long-term prospect for the middle-scale farms specialized in grain production. Nevertheless, it is questionable if the future of Hungarian animal breeding and rural employment should be endangered by the excessive expansion of bio-energy production.

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The Hungarian agricultural sphere today is seriously divided in almost every aspect. This division is increasingly hampering the development of strategies that our future could be based on, and presents an obstacle to concerted actions which are unavoidable if we wish to implement these strategies. One group within the Hungarian agricultural sphere, mostly bigger-scale farms, are making efforts to adapt to the changing environment and the opportunities created by EU membership. At the same time they do not concern themselves with those lagging behind and with small farms, nor do they deal with the special problems of rural Hungary. The other group within the agricultural sphere vehemently opposes everything that is big, and wants more Hungarian specialties and bio-products, while refusing to accept the given realities of Hungarian agriculture. The consequences of the division could be enumerated at length. Dialogue between the two sides is restricted to a minimum, and in terms of a future perspective this sort of division will result in the postponing of decisions that are of critical importance.

5. CONCLUSIONS, RECOMMENDATIONS

Laying the foundation of the future of Hungarian agriculture requires a thoughtful strategy built on a wide consensus. The National Rural Development Program and the documents connected with the reform of the CAP determine the most important steps to be taken and essentially denote the appropriate directions for future development. However, an operational strategy that would be accepted by the overwhelming majority of the players and that could serve as a basis for dissolving divisions within the Hungarian agricultural sector is still missing. Global and regional changes make the revision of our agricultural policy and the analysis of our long-term agricultural interests unavoidable. The future of Hungarian agriculture and of rural Hungary requires consensus and taking steps beyond the level of declarations, primarily in regard to a few essential issues of agricultural policy like farm structures and the land usage. The achievement of this objective is possible only if there is a greater readiness to reach a compromise and there are less short-term political considerations.

A longer-term approach and more thoughtful position is highly justified especially in terms of the impacts of the expected liberalization of the agricultural markets, bio-technology and bio-energy production. As previously mentioned, a more liberalized EU agricultural market could be beneficial for Hungarian agriculture in the long run. Obviously, short-term risks are high. It would nonetheless be quite unfortunate to be the first to join the camp of the opponents of change. The situation is quite similar regarding the Hungarian position on GM plants. In this field, our position is one of the most conservative ones, which is rather a kind

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of barrier even to scientific experiments. Further analyses of the issue, free of bias, are needed in order to appropriately represent the interests of Hungarian producers and consumers. The development of bio-energy production is another field requiring thorough consideration and temperate decisions. The past four years clearly illustrate the importance of the field and its expected positive and negative impacts. Rising cereal crop prices in 2007 slowed down developments, which were given a new impetus by the corn surplus of 2008. However, besides the domestic development of bio-energy production we should not forget that during the past few years, Hungarian animal breeding sank to unprecedented depths and today we even have to import pork. Bio-energy production can absorb the grain surplus, but at the same time it generates competition on the cereals markets, which can contribute to the further decline of animal breeding and decrease the domestic food production potential, not to mention the negative influence it exerts on rural employment.

The future of the CAP is an extremely important strategic issue. The majority of the reform proposals on the agenda impose a direction of change which is unfavorable for our domestic agriculture. The players of Hungarian agriculture know relatively little about these proposals and their potential indigenous consequences. First of all, broader and deeper debates would be needed in order to develop a clear-cut position that best serves Hungarian interests. The shaping of the future of the CAP should not be the issue of the ministry or a narrow circle of professionals only. A comprehensive preparatory work covering a wider section of the sector is necessary, as well as greater involvement of our agricultural diplomacy to ensure that the specific circumstances and problems of the new Member States, including Hungary, be adequately addressed.

Our agriculture represents a *diversity of agricultural producers and farms*. The “small farm and big farm” debate, often having political overtones, has been on the agenda for years. Efficient agricultural production can be organized according to different sizes. Both small and big farms alike can enjoy advantages under certain conditions and human resource provisos. Therefore, the preparation for future challenges in agricultural policy requires acceptance of the diversity of farms. If so, the application of a differentiated agricultural policy is required, which does not seek to transform small farms into big ones, or big farms into small ones, but provides assistance with means adapted to the special features of unique farm types. For big-scale farms the transparency of economic criteria is the most important factor. Big-scale farms are generally capable of taking advantage of market opportunities and representing themselves efficiently in a discrimination-free environment. However, small- and middle-sized farms need support that is tailored to their circumstances and conditions. Therefore, supporting the develop-

ment of small farms and their access to markets should be given appropriate emphasis in agricultural policy.

It is beyond doubt that regarding agriculture as a whole, the strengthening of its competitiveness and the measures serving this purpose are of primary importance. This is a complex task that should cover the further development of the regulatory system, the expansion of knowledge and skills, investment and development and the related infrastructural and logistical investment.

The fragmentation of land property and the rigidity of rules on land usage represent a serious barrier for agricultural producers, especially for those intending to make investments. It is a crucial issue for the future whether we will be able to implement measures that foster a more efficient usage of land. Fragmented landed property, along with the restrictions regarding ownership, has become one of the most important barriers to development. Relaxing ownership restrictions or totally abolishing them, if coupled with thoughtful land planning, could accelerate the inflow of new resources into agriculture and could facilitate the recovery of animal breeding and irrigation.

The regulatory system concerning agriculture is excessively rigid, dogmatic in some cases, characterized by a practice that neglects the specific circumstances of agriculture and by the almost literal application of EU directives. A more competitiveness-orientated and more flexible regulatory practice is required, in which environmental protection is more “production-friendly”, animal health service is more “livestock-friendly”, and labor regulation is adapted to the specific needs of agricultural production.

Rapid technological development based on scientific results is a high priority. The precondition for this is first of all the intensification of investment in general, and a more purposeful investment and development practice by the state in particular. It would be advisable to review the priorities of support programs financed by rural development funds, considering the wider national strategic objectives of agricultural development (for example: development of irrigation instead of support for machinery). In connection with all this, the appropriate level and pace of funding for agricultural research is necessary that enables science to perform this enormous task, to exploit modern plant improvement and the opportunities provided by modern biology. Global analyses have unequivocally proven the highly effective nature of agricultural research. In spite of this, even in the vast majority of developed countries, including Hungary, there is a perceptible decline of investment in agricultural research. Although the private sector is filling an increasingly bigger role in agricultural research, it has been able to compensate for decreasing state subsidy only in some particular fields.

As mentioned before, a transformation of the relation between producers and markets is underway. Vertically organized food chains, in which revolutionary

changes in food trade is becoming more and more predominant. The ability of producers to adapt to these changes and integrate into the new market conditions is one of the most important challenges of the near future. Producers and especially small farms in terms of cooperation need help and support to position their products on the market. We must, by means of agricultural cooperatives, endeavor to approximate the sales at least to the level of the leading new Member States, for example the Czech Republic.

A higher level of coordination between the state and the private sector is also an important priority. Although the development of agriculture depends on the private sector, both state subsidies and efficient supervision and control will continue to remain indispensable in the future. Consequently, the demands of production and the market require more efficient cooperation between the state and the private sector. The state should participate by means of decreasing its direct intervention and financial support. Among the conditions of restructuring agricultural and food markets, the most important responsibility of the state is to guarantee the production of safe and healthy food, as well as to gradually develop the regulatory and institutional background of market operation.

Not only is agriculture being restructured, but the surrounding economy is as well. It is very important *to create a new type of synthesis between agriculture and rural areas*, in which agricultural production and the non-agricultural economy of the rural areas compose a coherent unity. In this framework, the role of local initiatives and small communities in terms of efforts to improve rural living conditions and to close the gap between rural and urban areas, is enhanced.

The precondition for the long-term development of agriculture is the *priority development of the physical and social infrastructure in rural areas*. According to international surveys, the development and expansion of the road system, especially in the most underdeveloped regions of the world, are at the same time one of the most important investments targeting agriculture. The growing emphasis on knowledge and special skills draws attention to the importance of rural education. Therefore, the agriculture of the future as a whole is inseparable from the development of rural infrastructure and education, and it is hard to imagine it without them (Csáki 2006).

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