

Organic agriculture as one of aspects of multifunctional agriculture

Ekologické zemědělství jako jeden z aspektů multifunkčního zemědělství

I. BROŽOVÁ

Czech University of Agriculture, Prague, Czech Republic

Abstract: The incorporation of Czech agrarian sector in the Common Agricultural Policy of the EU means also the application of so called "European Model of Agriculture" which reacts to a basic requirement of socially balanced and sustainable agriculture which contributes to maintenance and an improvement of the European agricultural cultural landscape. In connection with it, a new strategy of agrarian policy was set according to which the orientation of Czech agrarian sector changes in a principal way, which was focused up to now only on the production function and also its other functions become more important, above all in the environmental and social, so non-production area. One of the aspects of multifunctional agriculture is an organic agriculture, a system which fulfills visions of sustainable agriculture.

Key words: multifunctional agriculture, organic agriculture, sustainable agriculture, non-production functions

Abstrakt: Začlenění českého agrárního sektoru do společné zemědělské politiky EU znamená i aplikaci tzv. „Evropského modelu zemědělství“, který tak reaguje na základní požadavek sociálně vyváženého a trvale udržitelného zemědělství, které přispívá k uchování a zvelebování evropské zemědělské kulturní krajiny. V souvislosti s tím byla vytyčena nová strategie koncepce agrární politiky, podle níž se mění zcela zásadním způsobem orientace českého agrárního sektoru, který byl doposud zaměřen pouze na funkci produkční, a nabývají na významu i jeho další funkce, především v oblasti environmentální a sociální, tedy mimoprodukční. Jedním z aspektů multifunkčního zemědělství je ekologické zemědělství, systém, který naplňuje vize trvale udržitelného zemědělství. V posledním desetiletí dochází k jeho velkému rozmachu na celém světě, ale i v Evropě. Ekologické zemědělství tak reaguje na stále sílící požadavky spotřebitelů na kvalitnější a bezpečnější potraviny.

Klíčová slova: multifunkční zemědělství, ekologické zemědělství, trvale udržitelné zemědělství, mimoprodukční funkce

INTRODUCTION

At present time, when also in agriculture principles of sustainable development begin to be applied, agriculture does not fulfill "only" the production function in developed countries, but also other functions are underlined, non-production, mainly in the environmental and social area. Than the importance of agriculture, that is necessary to be understood in the linkage with a complex development of rural areas, have an immediate relation to the environment.

A suitable alternative which answers the principles of sustainable development and at the same time contributes to the solution of economic and social problems of the countryside is organic agriculture. organic agriculture cannot by far solve all problems which Czech

agriculture faces but it can contribute to their reduction by creation new work opportunities and extraordinary export opportunities, which Czech producers have in comparison with suppliers from other countries.

AIM AND METHODOLOGY

Organic agriculture in the Czech Republic

The Czech Republic endorses the European model of multifunctional agriculture which understands agricultural production not only as a resource of safe and quality food, but also as an important element in the creation and protection of landscape. Therefore, the effort of all measures aims to a new trend which is applied by the EU, to support the integrated devel-

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opment of rural space in which agriculture plays an unsubstitutable role. Among priorities, there above all belongs stabilization of agricultural production, sustainability of its dimension, maintenance and cultivation of cultural landscape with sufficiency of work opportunity and development of the infrastructure in rural areas (Horizontální plán ... 2004).

Reasons of creation of a new alternative system of economy were motivated by the negatives of the intensive conventional way of economy which damaged the nature; treated animals badly; reduced the food quality; endangered social safety of farmers; and the health of population. That way an organic agriculture arose which represents one of the possible approaches to solve the structural policy and present agriecological, economic and social problems of the countryside, in harmony with the principles of sustainable development (Urban, Šarapatka 2003). The development of this alternative way of economy intensifies in last years and it is a recognized part of agricultural system not only in the CR, but also across the world.

At present time, this form of agricultural economy is applied with generally increasing interest also in the Czech Republic.

Comparisons of organic agriculture in the CR with the EU-15 and countries newly accessed the EU Community

Comparison by the share of areas farmed in organic way

An increasing interest in this alternative way of farming, which is environment-friendly and eliminates

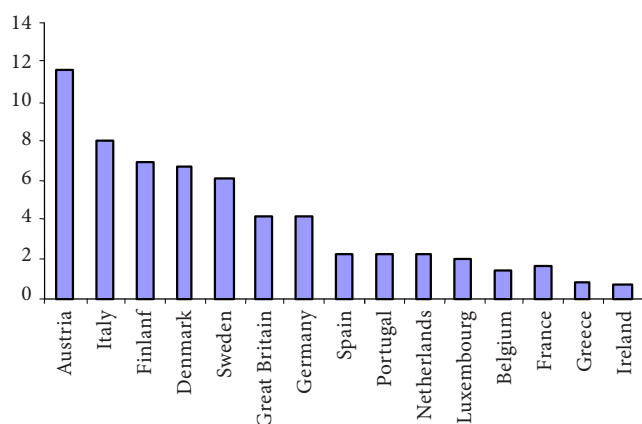
the negatives of the conventional agriculture, proves both the growth of number of agricultural subjects farming organically and an increase of organically farmed agricultural areas (in 1990 3 organic farms were registered farming on 480 ha; in 2003 it was in total 810 organic subjects on more than 250 thousand ha of agricultural land which represents almost 6% of total area of agricultural land in the CR) (<http://www.mze.cz>).

From the viewpoint of the share of areas farmed in organic way on the total acreage of agricultural land fund (as the Figure 1 shows), the Czech Republic reaches an above-average values of the EU-15 countries (in 2002 it was 5.5%) because the average of the EU-15 countries was in 2002 4.1%. However, this share is in particular countries very different. On the first place, there was Austria with 11.6% share of organic land on the total acreage of agricultural land. On the second place, there was Italy placed with 8%. Scandinavian countries of the EU like Finland, Denmark and Sweden moved above the average. Great Britain and Germany drew near to the average and other countries of the EU-15 were under the average (<http://www.organic-europe.net>).

The CR was overtaken Austria, Italy, Denmark and Sweden in 2002 and on the contrary, the CR overtook such state of the EU-15 as it is e.g. Great Britain and Germany. Among the states which accessed the EU newly to the May 1, 2004, the CR is on the first place in the extent of acreages included in organic agriculture and in the development of domestic sale.

Organic agriculture develops mainly in hilly and mountain areas on permanent grass stand and it focuses above all on landscape maintenance. In some

% share of areas



% share of areas

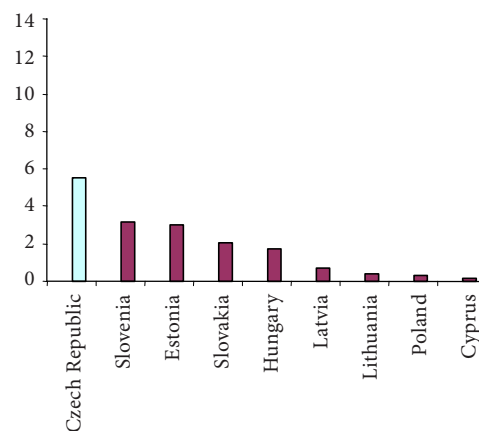


Figure 1. The share of areas farmed in organic way on the total acreage of the agricultural land fund in the year 2002

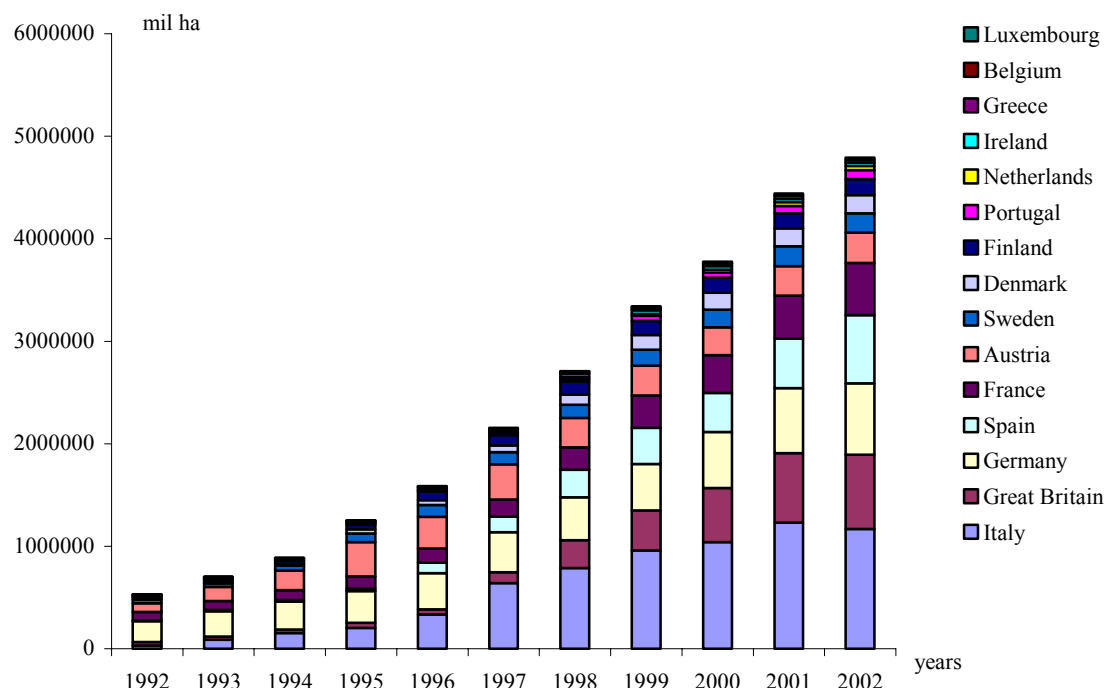
Source:<http://www.organic-europe.net>

Notes: data from Malta were not disposable

regions, e.g. the microregion Jeseníky, the share of organic agriculture reaches 25% of agricultural land acreage (<http://www.mze.cz>). More than 90% from the land fund is created by permanent grass stands. However, there is a small amount of bioproducts; ready products are missing, especially vegetables and fruits. Even if the bioproducts market develops quickly and consumers' demand grows, the CR belongs to the states where the share of biofood in the total food consumption is low. Biofood creates only

0.06% of biofood market and the assortment is still insufficient (<http://www.pro.bio.cz>). (The biofood consumption in the countries EU-15 approaches to 5%. The highest values of consumption are reached by e.g. Denmark, Sweden, Great Britain, Switzerland and France. In 2005, organic agriculture should have covered according to the new forecast, about 5 to 10% of the market.)

In many products in the CR the demand exceeds the supply, mainly if it regards fresh fruit, vegetables,



| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---------------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|-----------|-----------|
| Italy | 30 000 | 88 437 | 154 120 | 204 494 | 334 175 | 641 149 | 785 738 | 958 687 | 1 040 377 | 1 230 000 | 1 168 212 |
| Great Britain | 35 000 | 30 992 | 32 476 | 48 448 | 49 535 | 106 000 | 274 519 | 390 868 | 527 323 | 679 631 | 724 523 |
| Germany | 202 379 | 246 458 | 272 139 | 309 487 | 354 171 | 389 693 | 416 518 | 452 279 | 546 023 | 632 165 | 696 978 |
| Spain | 7 859 | 11 674 | 17 208 | 24 079 | 103 735 | 152 105 | 269 465 | 352 164 | 380 920 | 485 079 | 665 055 |
| France | 85 000 | 87 829 | 94 806 | 118 393 | 137 084 | 165 405 | 218 790 | 316 000 | 370 000 | 419 750 | 509 000 |
| Austria | 84 000 | 135 982 | 192 337 | 335 865 | 309 089 | 345 375 | 287 900 | 290 000 | 271 950 | 285 500 | 297 000 |
| Sweden | 33 267 | 36 674 | 48 039 | 83 490 | 113 995 | 118 175 | 127 330 | 155 674 | 171 682 | 193 611 | 187 000 |
| Denmark | 18 653 | 20 090 | 21 145 | 40 884 | 46 171 | 64 329 | 99 163 | 146 685 | 165 258 | 174 600 | 178 360 |
| Finland | 15 859 | 20 340 | 25 822 | 44 695 | 84 556 | 102 342 | 126 176 | 136 665 | 147 423 | 147 943 | 156 692 |
| Portugal | 2 000 | 3 060 | 7 267 | 10 719 | 9 191 | 12 193 | 24 902 | 47 974 | 50 000 | 70 857 | 85 912 |
| Netherlands | 10 053 | 11 150 | 11 340 | 12 909 | 14 456 | 16 960 | 19 323 | 21 511 | 27 820 | 38 000 | 42 610 |
| Ireland | 5 101 | 5 460 | 5 390 | 12 634 | 20 496 | 23 591 | 28 704 | 32 478 | 32 355 | 30 070 | 29 850 |
| Greece | 250 | 591 | 1 188 | 2 401 | 5 269 | 10 000 | 15 402 | 17 500 | 24 800 | 31 118 | 28 944 |
| Belgium | 1 700 | 2 179 | 2 683 | 3 385 | 4 261 | 6 654 | 11 744 | 18 572 | 20 265 | 22 410 | 20 241 |
| Luxembourg | 500 | 497 | 538 | 571 | 594 | 618 | 777 | 1 002 | 1 030 | 2 141 | 2 004 |

Figure 2. Organically farmed areas in the EU-15 countries in years 1992–2002

Source: <http://www.organic-europe.net>

beverages, milk, eggs and so on. A lack of animal products is connected with higher manufacturing demands, a short expiration (food durability) and strict hygienic norms. Also the research development is not sufficient; there is a lack of specialized consultancy, a low informedness of consumers about organic production, but also non-uniform price policy. Despite the higher price level of biofood, the interest of consumers is permanent and it has even a growing tendency.

The aim of the Operation Plan is to reach 10% of the agricultural land included in the organic agriculture in 2010 in the CR.

Comparison by the acreage farmed in organic way

Even if in the size of acreages farmed in organic way the Czech Republic is under the EU-15 average and many states (above all Italy, Great Britain, Germany, Spain, France) exceed the acreage 235 thousand ha, in the world scale, taking into account the organically farmed areas, the CR took the fifteenth place and became a significant world producer of biofood (Biopotraviny... 2003).

From the Figure 2, it is obvious that more than one third of organic land from the EU-15 countries lies in Italy (c. 1 170 thousand ha). Great Britain took the second place and farmed in organic way over 700 thousand ha of agricultural land. The third place belongs to Germany with the 14.5% share in the total organic acreage of the EU. In Spain, this share was less than 14% and in France 10.6%. Other EU states moved deep under the 10% share from the total EU acreages.

In comparison of ten-year development of the volume of farmed areas in the EU-15 countries from 1992 to 2002, the highest yearly increase of areas was marked in Greece where the areas increased every year by 60.8%. In Spain the yearly increase in the monitored decade was 55.9%; in Portugal 45.7% and in Italy 44.2%. In Great Britain in 2002 the number of organically farmed areas was twenty-one-times higher in comparison with the year 1992. In other EU countries, this yearly increase moved under the EU average.

The CR in 2003 farmed in organic way 254 995 ha. Among the states, which newly approached the EU by the May 1, 2004, it was on the first place in the number of farmed areas (Figure 3).

From the new member countries, also Hungary belongs to significant producers. In 2002 it farmed c. 103 thousand ha of agricultural land in the organic way and it is an important exporter of bioproducts.

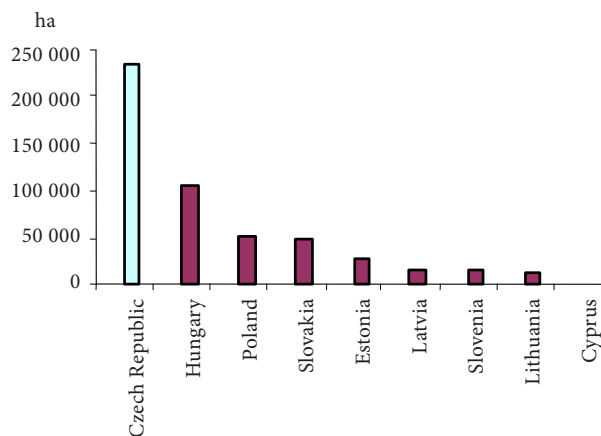


Figure 3. Organically farmed acreages in countries which accessed the EU by the May 1, 2004, in 2002

Source: <http://www.organic-europe.net>

Notes: data of Malta were not disposable

While in Poland organic agriculture does not reach such an importance, as evidenced also by a small area farmed organically – c. 53 thousand ha. The demand of consumers for bioproducts exceeds supply considerably and as the main obstruction of development, there is considered markets unstability and legislative unreadiness.

Also in Slovakia an increase of organic agriculture was recorded. In 2002 there was farmed c. 50 thousand ha and the aim of Slovak agriculture till the year 2010 is to increase these acreages three-times and reach a 4-6% share in the agricultural land fund.

Comparison by the number of subjects farming in organic way

Numbers of organic enterprises in the CR fell behind other EU-15 states. In comparison with Italy, which reaches the highest number, the CR has roughly 75 times less eco-farms. Interesting fact is that organically oriented enterprises existed in the CR already before the year 1989.

The share of the number of eco-farms in agricultural enterprises in the CR in total was slightly under the average reached in the EU-15, which reached 2.4%. Also this share differs in particular countries of the EU-15. The biggest share was gained by Austria (9.2%), Finland (6.8%), Denmark (5.9%) and Sweden (3.9%).

The number of organic enterprises in the particular countries is shown in the Figure 4.

In the year 2002, more than one third of all eco-farms was in Italy. In Austria, this share makes 13.2%, in Spain 12.8%, in Germany 11.2% and in France 8%.

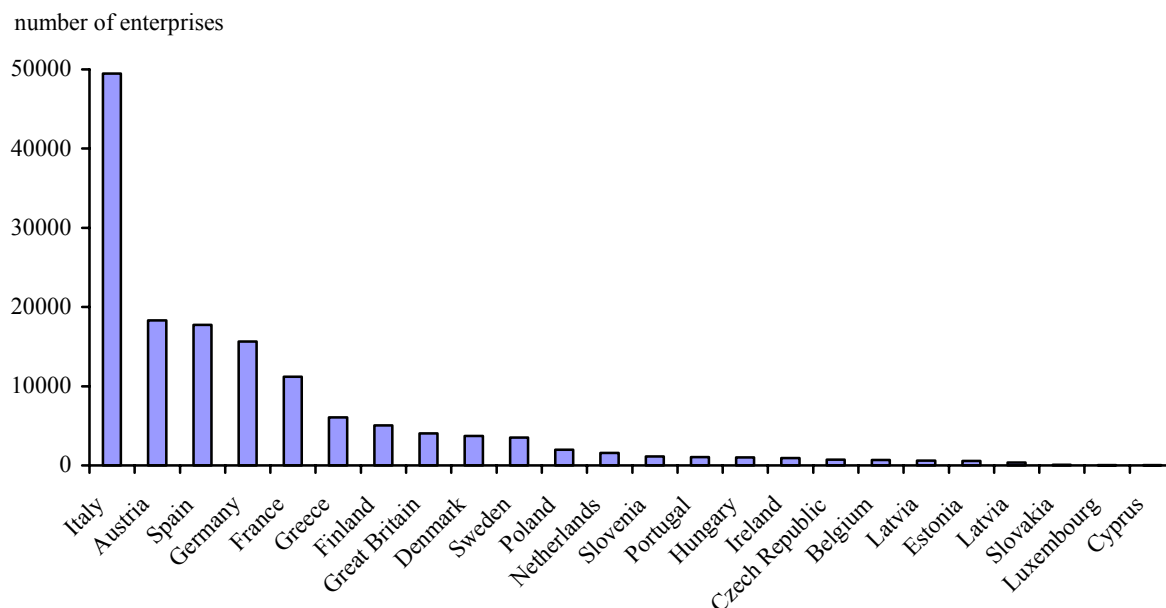


Figure 4. The number of organic enterprises in the EU-15 and new member countries

Source: <http://www.organic-europe.net>

Notes: data of Malta were not disposable

Even though a dynamic increase of the number of enterprises happened during 1992–2002, since 1997 the pace of the growth has slowed down and the increase of number of eco-farms within the EU-15 is slower than the increase of organically farmed lands.

Organic farms also differ considerably in their size. It depends besides other also on the externalization of their production. In Italy, the land acreage of eco-farms is three times bigger than the average of all other enterprises. In Germany, both forms of agriculture are in balance; eco-farms manage at average 40 ha, the same as conventional ones. On the contrary, there are enterprises in Austria, France and Luxembourg, which are smaller in average than other enterprises, because in these countries enterprises with worse land equipment expect higher incomes from the transition to an organic production (<http://www.organic-europe.net>).

The same applies to organic farming in Poland, there is a small average size of eco-farms – 15 ha, which is approximately double the size of an average agricultural enterprise in Poland.

In Scandinavian countries, there are grown in organic way cereals and fodder crops. One fourth of organic areas in Denmark, Finland and Sweden take permanent grass stands. In Southern states like e.g. Spain, Portugal, Greece, France and Italy, above all meadows and pastures dominate, they are followed by legumes and cereals. The cropping pattern is here much more varied than in northern countries thanks

to more favorable growing conditions. They include often vine and olives production. Meadows and pastures are used for animal production. The biggest share of meadows and pastures is characteristic for the Netherlands, Belgium, Luxembourg and Austria. Cereals and fodder crops have only a small significance here. Animal production focuses mainly on cattle breeding.

CONCLUSION AND DISCUSSION

The priority of agriculture of developed countries, which produce an agricultural surplus, is not now the production function, but non-production functions are getting to the foreground. They include the function of landscape creation, ecological function, social and demographic functions. During the last years, it is possible to monitor a dynamic growth of alternative ways of farming, which are friendly to the environment and are in a harmony with the principles of sustainable development. A new alternative way of farming, which is environment-friendly and at the same time enables to meet the needs of consumers for quality and safe food, it is organic agriculture. Organic agriculture seems to be a very perspective branch of the agrarian sector and in the process it gets more and more adherents. It is not to be expected that it would widen to such an extent that it would replace the conventional agriculture completely. If the aim of the organic agriculture were

only an achievement of growth of agricultural production, this aim would be focused on an intensification of agriculture in concurrence with the substance of sustainability.

The development of organic agriculture was and always will be influenced first of all by the level of a stable support. The entrance in the EU means for the CR an important step in the area of development of organic farming. For the Czech exporters, many opportunities arose how a unified, however, internally structured EU market should be supplied with bioproduction.

With the entrance in the EU, a way for the CR should be open to an increase of state support, strengthening of a legislative, more thorough control of certified products, and to contribute to the general improvement of conditions of Czech organic producers.

The CR has from all states, which approached the EU to the May 1, 2004, the most organically farmed areas and as a rightful member exceeded in number of ecologically farmed areas many of its members.

However, the organic agriculture in local conditions has still considerable reserves in area of bio-products market and in number of organic farmers in comparison with other EU states.

The future of organic agriculture should not be only a question of material values connected with the payment of subsidies, but also a question of ethical

values. An attention should be paid not only to the control of organic agriculture products, but also the control of own eco-farms oriented on organic plant and animal production.

A motivation of eco-farmers and their responsibility for the future environment of life and consumers' health should have primary significance not only in the CR conditions, Europe, but also all over the world.

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Contact address:

Ing. Ivana Brožová, Česká zemědělská univerzita v Praze, Kamýcká 129, 165 21 Praha 6-Suchbát, Česká republika
tel. +420 224 382 304, e-mail: brozovai@pef.czu.cz
