

Organic beef farming in the Czech Republic: structure, development and economic performance

Ekologický chov skotu v České republice: struktura, vývoj a ekonomická výkonnost

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Abstract: The paper analyzes the development and the prospects of organic farming in the Czech Republic with particular emphasis on organic beef farming. The background information on organic farming in the Czech Republic regarding the structure of land use, legislation and support payments as well as a short description of the market for organic beef is provided. An analysis of the economic performance and of the impact of payments on the economic situation of organic beef farms follows. Grazing livestock farms, mostly cow-calf systems, are the most widespread farm type in the Czech Republic. Five typical farm models were set up with the aim of giving an overview of the diversity of organic beef production systems. The results indicate that organic beef farming is in most cases economically viable. Nevertheless, organic farming payments, as well as other payments, account for a high share of economic success, so that it can be stated that organic grazing livestock farms are highly dependent on support payments.

Key word: organic farming, state support, prices, cattle, economic performance

Abstrakt: Příspěvek analyzuje rozvoj a perspektivy ekologického zemědělství v České republice s důrazem na ekologický chov skotu. V příspěvku jsou obsaženy základní informace o struktuře půdního fondu v ekologickém zemědělství, legislativě, finanční podpoře včetně stručného popisu trhu s ekologickým hovězím v České republice. Dále je analyzována ekonomická výkonnost a vliv státních podpor na finanční situaci ekologických farem s chovem skotu. Tento typ farmy zaměřený zejména na chov krav bez tržní produkce mléka je nejrozšířenějším typem v podmínkách České republiky. Vzhledem k odlišnostem v systému chovu skotu bylo sestaveno pět typických modelů farem. Výsledky ukazují, že ekologický chov skotu je ve většině případů ekonomicky životaschopný. Avšak velký podíl na úspěšném hospodaření mají jak dotace pro ekologické zemědělství, tak také ostatní dotace a lze konstatovat, že ekologický chov skotu je vysoce závislý na státní finanční podpoře.

Klíčová slova: ekologické zemědělství, státní podpora, ceny, skot, ekonomická výkonnost

Organic farming in the Czech Republic started in the early 1990s. It is gaining more and more importance, and due to the accession to the European Union, a significant development can be expected. Membership in the EU will have impacts at the farm level as access to markets will improve and, much more important, government payments to farmers increased significantly. Organic farms are eligible for different kinds of payments. Organic farming payments, agri-environmental payments, payments for less favoured areas are to be mentioned. According to the Czech legislation,

they all add up (see also Doucha 2004). These payments have considerable impacts on the economic performance of organic farms. The comparison of the economic results with those of conventional farms will give information on the possible conversion rates and by that information for policy makers regarding efficient support of organic farmers according to policy goals (the Organic Farming Action Plan in the CR). The economic results of organic farms presented here refer to the year 2003, which is the last year before accession. Payments to organic farms did not change in

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principle, but in the amount, as most of them increased. Thus, the relative importance of state support even increased since then.

By far most of the organically managed land in the Czech Republic is grassland, mostly used by suckler cow herds, and to a lesser extent by dairy cows (Jánský et al. 2004). That is why the emphasis of this study points to grazing livestock farming as the most important activity in organic farming in the CR, at least for the time being. The aim of this paper is to give information on the political and market situations faced by organic beef farmers in the Czech Republic and to assess the economic impacts at farm level.

This paper consists of two parts. The first one is a rather extensive overview over the different aspects of organic farming, followed by an analysis of the economic situation of organic grazing livestock farmers, particularly beef farmers in the Czech Republic.

ORGANIC FARMING IN THE CZECH REPUBLIC

History and development

The history of Czech organic agriculture started in 1990, when there were only three organic farmers in the country. From that year, the Ministry of Agriculture (MoA) began subsidising organic production. State payments for conversion to organic farming continued until 1992 and were obviously the

main reason for the increase in organic farming area up to around 15 000 hectares in 1992. The decision of the MoA to concentrate on developing the legislation and the regulatory framework, and to stop payments during the years 1993–1997 caused a stagnation of the development of the organic area (see Figure 1). Nevertheless, the certification and control system was started in 1993 (Zidek 2001) and the setting of the institutional framework resulted in an improvement of organic farming systems (MoA 2004a).

The largest expansion of land used for organic farming occurred in the years 1998–2001, particularly in connection with the renewal of government payments to organic farmers in 1998. This aid was provided in the form of direct payments, and was part of the government regulation concerning support of non-productive functions of agriculture. Since the year 2004, organic farming has been supported within the framework of new agri-environmental schemes in the Horizontal Rural Development Plan (HRDP) of the Czech Republic.

According to the preliminary results for the year 2004, there were 263 299 hectares of agricultural land managed organically. This accounts for more than 6% of the total agricultural area of the Czech Republic.

Structure of organic farming

Organic farming is mostly applied by agricultural enterprises in mountainous and sub-mountainous regions on permanent grassland. In some regions,

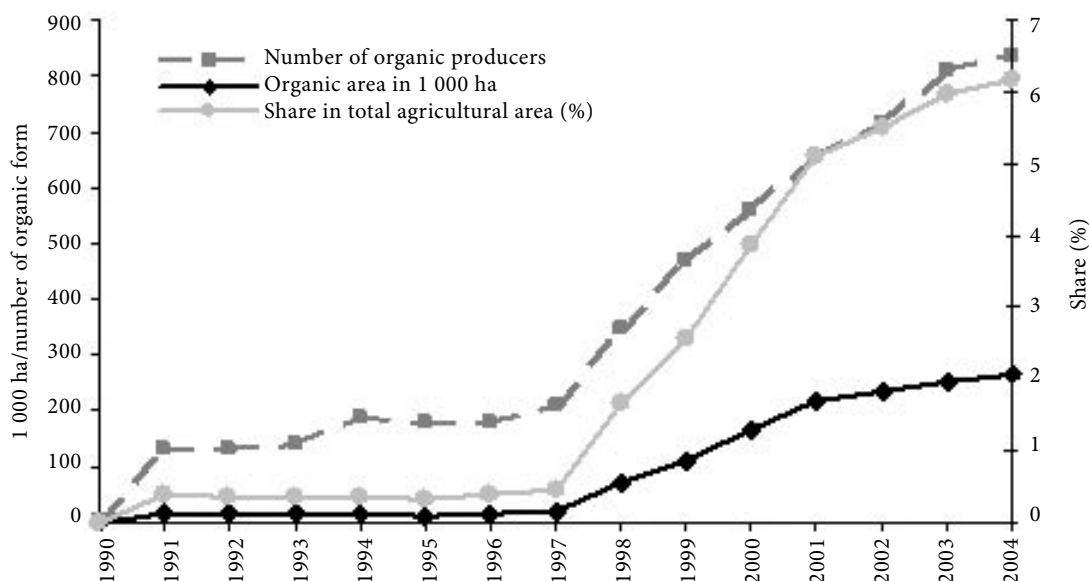


Figure 1. Development of organic farming from 1990 until 2004

Source: KEZ (2004b), MoA (2004c)

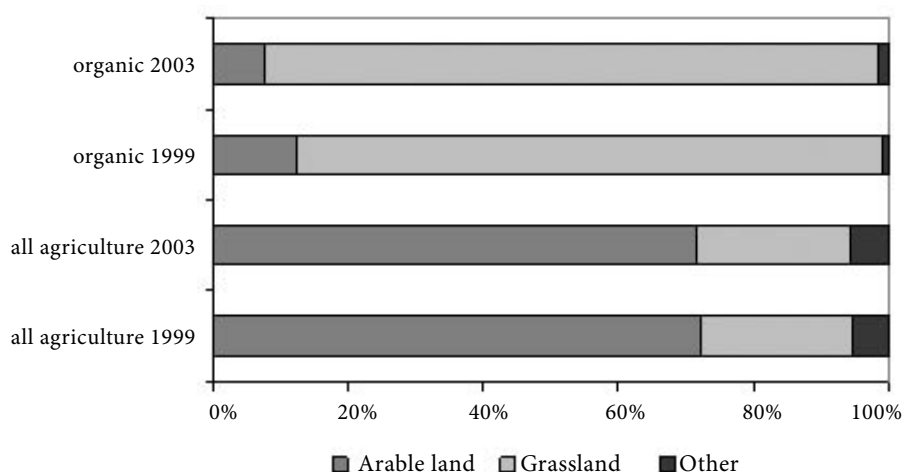


Figure 2. Land use in organic farming and in agriculture in total in 1999 and 2003

Source: KEZ (2004b), MoA (2004c)

for instance in the micro-region Jeseníky, organic farms cover up to 25% of the total agricultural area. About 90% of the organic area is grassland. This is completely different from the structure of the overall farming in the CR, where the share of grassland is only about 23% (Figure 2).

The share of organic arable land has diminished over the last years. This is due to a significant increase in the organically managed grassland, although the payments were reduced by half in 1999. The reason is supposed to be found in low risk and costs of converting grassland in marginal regions. Organic farming payments are seen as a financial top-up, having no impact on the low input farming practices. The same situation can be observed in other countries like e.g., Germany (Schulze Pals 1994; Osterburg, Zander 2004).

Organic farms are, in average, larger than conventional farms. The average size of organic farms in the Czech Republic is more than 300 ha (average of the years 2000 to 2003), compared to about 67 ha in conventional farms (ČSÚ 2003a)¹. The differences in farm size between organic and conventional farms are also due to the fact that organic farms are mostly grassland farms. Conventional grassland farms are supposed to be larger than the average size of all farms. Like in conventional farming, farm size is also very diversified in organic farming, so that farms with more than 3 000 ha acreage can be found too (see also Doucha 2004).

Animal production in organic farming

Animal husbandry in organic farming is dominated by grazing livestock farms, mostly cattle on grass-

land (Table 1). The next important group of organic farms are mixed farms with grassland and arable land combined with cattle husbandry as well as other animals (mostly sheep). Other animal production like pigs or poultry is of no significance in organic farming at this time.

Looking into more detail, it turns out that beef cattle husbandry in suckler cow herds is becoming more important as compared with dairy cattle husbandry over the last several years. In only two years, the share of meat cattle in all cattle increased from 90 to 95%. The reason for that lies mainly on the demand side as the market for (conventional) meat calves for finishing is satisfactory. The conversion to organic milk production is supposed to carry a higher risk. There is only one larger processing facility for organic milk, which means that most farmers face long distances. So for the vast majority of the farmers no

Table 1. Animal husbandry and production in organic farming (in heads) in the Czech Republic (2003)

	Number	Annual production
Cattle	103 262	10 112
Sheep	23 147	6 104
Goats	2 451	514
Pigs	2 143	1 724
Poultry	1 837	203
Horses	2 222	0
Fish	4 600	2 000

Source: KEZ (2004a)

¹ The average size of conventional farms larger than 3 ha is 142 ha (ČSÚ 2003a).

Table 2. Organic beef farming in the Czech Republic

	2001	%	2002	%	2003	%
Dairy cattle	7 997	10	7 452	9	5 566	5
Meat cattle	71 367	90	76 657	91	97 696	95
Total number of cattle	79 364	100	84 109	100	103 262	100

Source: KEZ (2004a)

price premia for organic milk can be realized which could compensate for the higher risk of converting dairy farms (Table 2).

Legislation

In 1993, the Methodological Instruction of the MoA for Organic Farming No. 655/93-340 became effective as a national directive and thus the first regulation on organic farming based on the IFOAM standards and in compliance with the EU-regulation 2092/91. Under this directive, the national inspection and certification system was established. On 1st January 2001, the *Act No. 242/2000* on organic farming came into force. This law sets standards for organic farming and organic food processing, as well as the certification and labelling system. It is the implementation of the *EU-Council Regulation 2092/91* at the national level. According to the Act No. 242/2000, the MoA has entrusted the KEZ o.p.s. (Organic Farming Control – NGO) with inspection and certification. Due to its certification system, the Czech Republic was included in the List of Third Countries of the EU in 2000 (plant production), respectively 2001 (animal production). The KEZ was granted the worldwide accreditation under the IFOAM Accreditation Programme in 2003.

Organic farming payments

From 1998 to 2003 (after renewal of support), the aid to organic farming (OF) was provided in the form of direct payments distributed under the government regulation concerning support of non-productive functions of agriculture. In the first three years (1998, 1999 and 2000), the OF support was based on a system of points. Organic farming rendered 10 points² which were the basis for receiving payments. The value of one point depended on the total budget and the total number of hectares applying for support. Since the year 2001, the well-known Regulation 505/2000 was valid with a fixed amount of money per hectare of organic area. Although the Regulation 505 was changed into 500/2001, valid for 2002 and 2003, the payments remained the same. Actually the support scheme for OF is part of the Horizontal Rural Development Plan (HRDP) and the particular conditions for application for and the granting of payments are named in the *Decree No. 242/2004* and its amendments (following the EU Council Regulation No. 1257/1999).

A comparison of the funds provided in the years 1998–2003 (Table 3) shows that the government budget for OF in 2003 was five times the amount of the year 1998. All the money was paid as area payments.

The difference between area devoted to OF and area supported under the scheme is caused mainly

Table 3. State support of organic farming in the Czech Republic

	1998	1999	2000	2001	2002	2003
Total support for OF (EUR)	1 315 601	2 287 423	2 501 916	4 912 762	6 828 294	7 266 491
Total area in OF (ha)	71 621	110 756	165 699	218 114	235 136	254 995
Supported area (ha)	24 045	67 600	98 745	155 164	195 036	213 698
Payment per ha (EUR/ha)*	55	34	25	32	35	34
Share supported area	34	61	60	71	83	84

*calculated average payment

Source: MoA (2004b, c)

² In the years 1999 and 2000, organic grassland was given 5 points, organic arable land 10 points and land used for permanent crops 15 points.

Table 4. Area payment scheme for organic farming (EUR/ha)

	1998	1999–2000	2001–2003	2004–2006	Increase
	I	II	III	IV	IV vs III (%)
Arable land	69	68	63	111	76
Grassland	69	34	31	35	10
Permanent crops	69	102	110	385	250
Vegetables	69	68	110	348	216
Spices	69	68	63	348	453

Source: MoA (2004c, e)

by the fact that the area eligible for payments must be registered at the end of the previous year. Taking this into account, 91% of total organic area receive organic farming payments.

Significant adjustments in organic farming payments took place as a consequence of the accession to the EU in 2004. Financial support increased significantly for most of the land uses (Table 4). Apart from this, no changes relevant at farm level took place. As before, no differences are made between payments during the conversion period and after completing the conversion period.

Due to the important increase in funds spent on measures other than organic farming with the adoption of the Common Agricultural Policy (CAP), the share of organic farming payments in the total amount of agri-environmental measures decreased from 20% (in the years 2001–2003) to less than 10% (for the time period 2004–2006).

Organic farming payments can be added to other payments such as agri-environmental payments and payments for less favoured areas (LFA).³ As most of the organic farms are situated in less-favoured areas and meet the requirements for low input land use (grassland), the total per hectare payments are much higher than only organic farming payments (for an example see Figure 4).

As a response to the political environment after the EU accession, the Ministry of Agriculture of the CR elaborated an *Organic Farming Action Plan* in 2004. Its aim is to enhance the development of organic farming in the country and to diminish the imbalances between the supply and demand for organic products. Research and capacity building of farmers, extension, investment aids and consumer information on organic farming were identified as the main issues of activity (MoA 2004b).

³ The only scheme, that is not allowed to be combined with organic farming, is integrated production in permanent cultures (vineyards and orchards), which has been implemented since 2005.

⁴ The range of prices is given by MoA (2004d). For the purpose of comparison, the upper bound was taken.

THE MARKET FOR ORGANIC BEEF IN THE CZECH REPUBLIC

With reference to the structure of organic farms, the most important animals in organic husbandry are cattle, and of this group, the most important animals are beef cattle from suckler cows (see Table 2). The main commodity produced are calves/weaners for fattening (80% of out-coming animals), as the prices are relatively better and because the farmers get their money earlier. Most of the animals are sold as conventional products also on export markets. Organically finished slaughter animals also mostly have to be sold at conventional markets.

The only information available on the prices organic farmers received for their beef are the results of a survey from the year 2004 (Živělová et al. 2005). The results are presented in Table 5.

When compared with data from the MoA (2004d)⁴, it turns out that the prices organic farmers received for their beef on conventional markets in 2002 and 2003 were mostly about 20% higher than the highest prices for beef out of conventional production. There

Table 5. Prices organic farmers received for beef in the CR (EUR/kg live weight)

	2001	2002	2003	2003 C
Bull calf for fattening	1.17	1.37	1.59	1.26
Heifer calf for fattening	1.17	1.37	1.59	1.26
Heifer for slaughtering	1.07	1.62	1.37	0.82
Bull for slaughtering	1.07	1.62	1.37	1.15
Cull cow	0.66	0.78	0.68	0.60

C – conventional prices, upper bound

Source: Živělová et al. (2005), MoA (2004d)

are significant differences between the different beef qualities, price premia was the highest for heifers (66% in 2003), which is the most important category in the beef processing. The superior meat quality, as the breeds in organic farming are higher valued, and a better understanding among organic farmers about animal health aspects are named as reasons for that (Pražan 2005 – person com.; Mládek 2005 – person com.).

Some small part of the produced beef is sold as organic. In the Czech Republic, there is one cooperative which runs a slaughterhouse processing organic beef products mainly from bulls and heifers. The beef is sold to supermarkets. The yearly processed quantity is stable at around 600 heads. According to the manager of the cooperative, the main problem for the time being at the processing level is the lack of a continuous supply so that at this moment, there is no plan to increase the quantity, either for domestic markets or for export markets. As a barrier for export activities, there was mentioned that the slaughter house is not certified for export nowadays and the expected price premium abroad is not high enough to cover the additional costs for increasing administration (Toman 2005). The monopolistic structure in supply of organic beef keeps the prices at a relatively high level.

A small survey among supermarkets selling organic and conventional beef concerning consumer prices showed organic products to be sold at prices by 17 to 100% higher than conventional products. Nevertheless, the organic beef market in the CR is very small and

the numbers given may serve as examples rather than as a general information.

ECONOMIC PERFORMANCE OF ORGANIC BEEF FARMS

After giving a general view of the political and market situation of organic beef production, in this section the emphasis is placed on the economic situation of organic beef producers at the whole farm level. The analysis includes the impact of government payments on key economic indicators of organic beef farmers. As the marketing of organic beef is quite difficult, state support is supposed to be the main incentive for conversion to organic farming.

Methodological aspects

The economic analyses are based on the typical farms approach. Setting up typical farm models means selecting farm types which represent a significant number of farms. There will never be representativeness in the statistical sense. The data basis is statistical data and expert knowledge. The latter was particularly important for the typical organic farming as little statistical data exists.

Data collection itself took place on real farms with characteristics very close to those of the defined typi-

Table 6. Key characteristics of selected typical beef farms in the CR

Region		CZ-B11	CZ-B70	CZ-B145	CZ-B160	CZ-D16
		Plzeňský	Královéhradecký	Karlovarský	Jihočeský	Plzeňský
Total UAA	ha	100	140	551	500	64
Permanent grassland	ha	100	140	551	430	10
Arable land	ha	0	0	0	70	54
Suckler cows	heads	11	70	145	160	–
Dairy cows	heads	–	–	–	–	16
Cattle sold per year	heads	7	30	101	62	10
Labour	AWU/100 ha	2	1.1	1	2	4.7
Farm family labour	FWU total	2	1.5	3	0	3
Hired labour	AWU total	0	0	3	9.5	0
Share of land	%	13	25	13	0	22
Comments		breeding	production of weaners			
Legal forms		family farm	family farm	family farm	Limited Co.	family farm
Off-farm income		no	yes	yes	no	yes

Source: Own compilation

cal farms. The economic and physical data of these individual farms were discussed with experts and the possible biases were levelled out. Thus the presented results are not those of the individual farms, but of typical farms, each representing a group of organic farms (IFCN 2004; Hemme 2000; Häring 2003).

Based on statistical information on organic farming in the CR and expert judgment, the following five typical farm types were selected (Table 6).⁵

Selection criteria for the definition of typical organic farms were: regional distribution of organic farming, farm size, main products, respectively main farm activities, production system and legal form.

Organic beef farming in the CR is very diversified like in many other countries, and so are the typical farm models for the CR. Most of organic beef production takes place in combination with suckler cow activity (see also Izquierdo-Lopez et al. 2005). Only one farm is a dairy farm which fattens its own calves. The majority of the farms are family farms and they all are located in hilly or in mountainous regions in the western part of the country. CZ-B11 is also doing sheep husbandry (30 ewes). All of the typical farms have to sell their animals or their beef conventionally.

Three out of five farms sell live animals, one of them breeding cattle, and two farmers sell weaners. All of the products are sold at conventional markets, as organic markets still are underdeveloped.

The farm models were built using the "TIPI CAL" – model (Hemme 2000). Local experts assisted with

their specific knowledge and with repeated communication with the farmers while the models were set up. A check of internal plausibility of the models completed the procedure of setting up the models. Thus the developed models are the result of a true participatory approach in farm economics research.

RESULTS AND DISCUSSION

Looking at the farm household level, the important question is whether the profit (here defined as family farm income, FFI) is high enough to cover all the costs of the living of the farmer's family (see Offermann, Nieberg, 2000). Figure 3 compares the family farm income with the expenses for family living. It turns out that in almost all of the farms profit is higher than family living. CZ-B70 disposes over significant off-farm income, so that requirements of the family household to be met by income from agriculture are rather low. The limited company (CZ-B160) does not have private necessities of money, as the labour force is paid for. Against this background, the profit of this farm is rather high. It can be stated that organic beef farming is economically viable, that means that the receipts cover all the costs incurred in agricultural production plus cost of family living.

Farm income in farms in all of the Western European countries, but also in most of the accession countries is generated partly by state support. This accounts for conventional farms as well as for organic farms

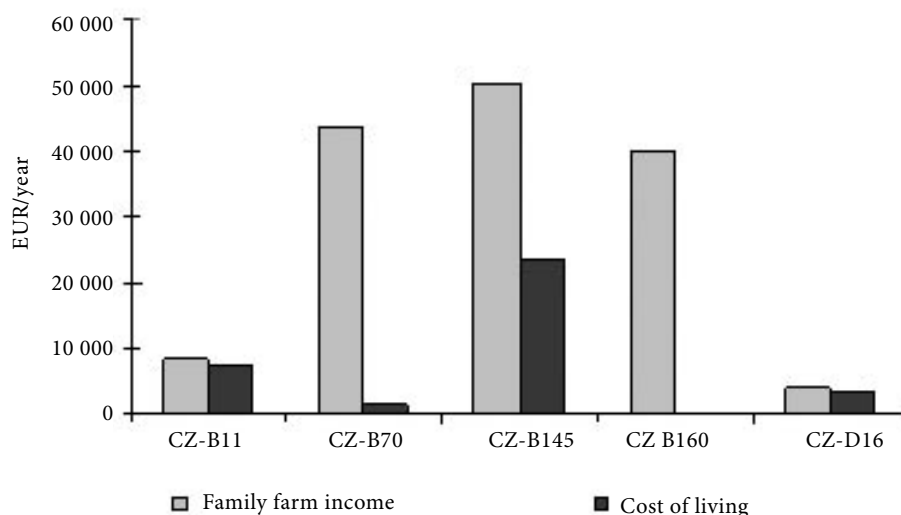


Figure 3. Family farm income and costs of living in typical organic beef farms (2003)

Source: Own calculations

⁵ The number in the identification of the farms stands for the farm size, according to the number of dairy or suckler cows.

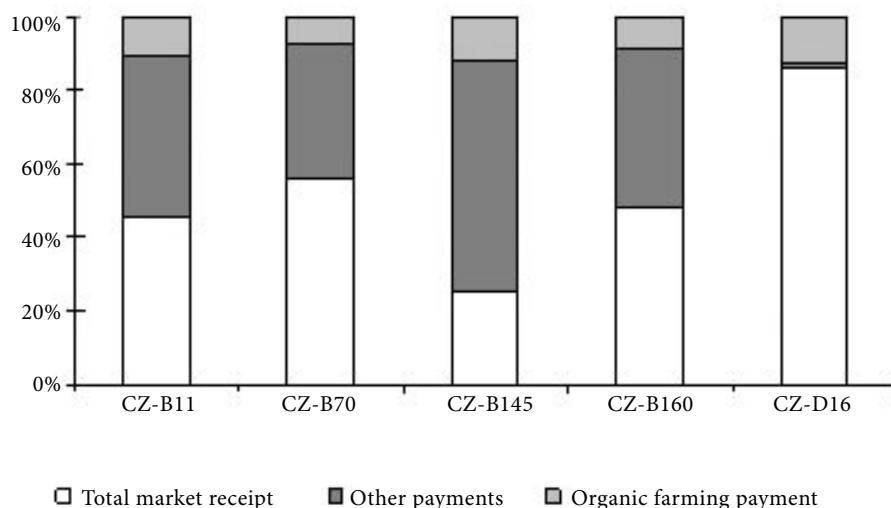


Figure 4. Market receipts and payments in typical organic beef farms (2003)

Source: Own calculations

(ZMP 2005; de Bont et al. 2005, Häring, Offermann 2005). Thus the underlying question of this chapter is about the relative importance of all payments and of organic farming payments in organic cattle production the CR.

Figure 4 compares the significance of all payments with that of organic farming payments in different farm types of organic cattle husbandry. Organic farming payments account in all farms for about 10 percent of the total receipts. There are no differences between dairy and suckler cow farms. Whereas in the dairy farm other payments do not have any impact on the income situation of the farmer's family, they are very important in suckler cow farms. As all the suckler cow farms are located in low input grassland

regions, they are eligible for payments under the rural development programme, particularly for different agri-environmental measures and for less favoured area payments. Additionally, they receive beef premia. Total payments in grassland-based suckler cow farms sum up to 50 to 75% of all revenues.

The numbers show that all of the other payments together are much more important than organic farming payments for the economic situation of organic grazing livestock farms. As suckler cow production is a system with a very low intensity, the step from conventional to organic farming is a very small one, so that organic farming means very few additional costs, but additional payments. Payments for other agri-environmental payments and organic farming payments

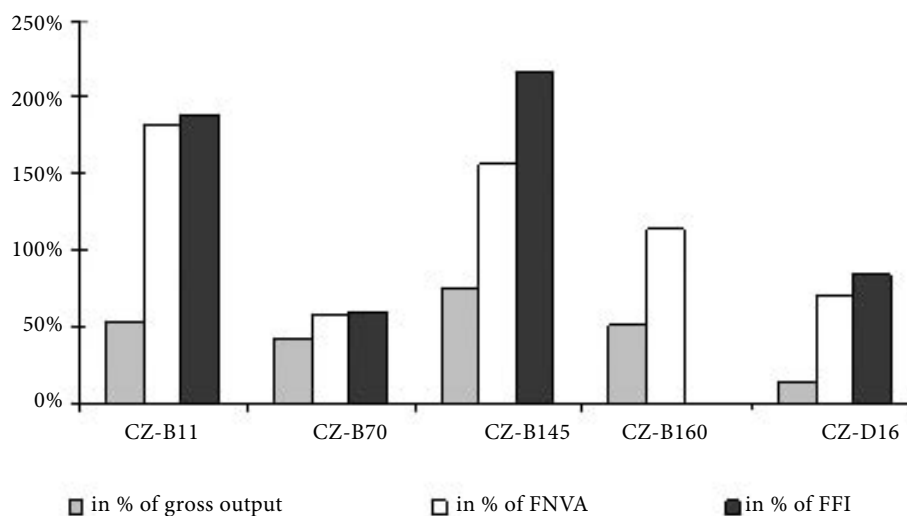


Figure 5. All payments as the share of different economic indicators in typical organic beef farms (2003)

Source: Own calculations

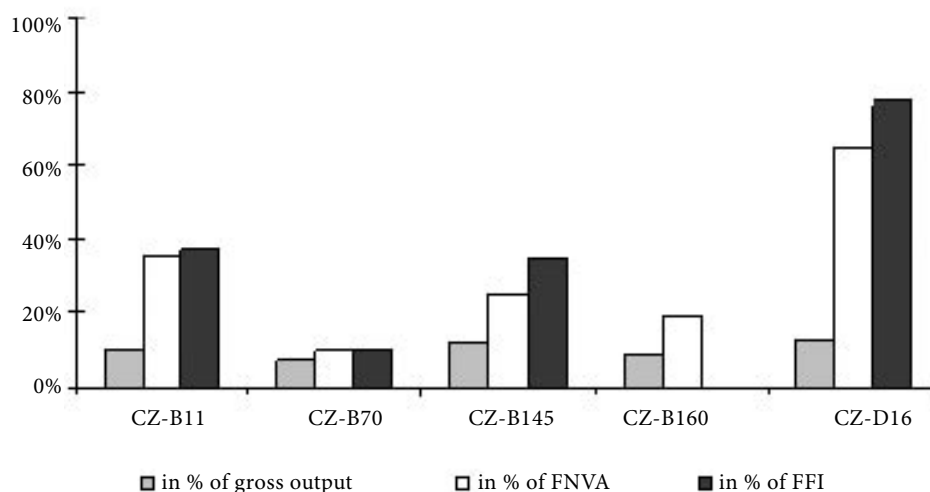


Figure 6. Organic farming payments as the share of different economic indicators in typical organic beef farms (2003)

Source: Own calculations

sum up, so that organic farming payments are mostly seen as a top-up. So it is not the absolute amount of organic farming payments which causes high conversion rates in grazing livestock farms (Anonymus 2004) but relatively high payments, as the costs of conversion of low-input cow calf systems are quite low.

The relationship between market receipts and payments is only one indicator, as it does not take into account production costs. Figure 5 shows the importance of all payments in percent of the different economic indicators of success at the farm level. For reasons of comparability, the share in gross output is included too. In two out of five cases, the share of all payments is more than 100% of the profit (= Family Farm Income, FFI). That means that without payments, there would be no resources for remuneration of the factors owned by the farmers family. In case of the limited company, this indicator is not relevant as there are no family owned factors to be paid for from the profit. That is why another indicator was chosen too – farm net value added (FNVA). FNVA is the profit plus all expenses for labour, land, and capital and by that the income of the fixed factors of production (labour, land and capital). If all payments together are higher than FNVA, no farm income would be left for remuneration of the fixed factors of production if there were no payments at all. This is the case for the small cow-calf farm (CZ-B11) and for the two large farms (CZ-B145 and CZ-B160). These results may serve as a proof of the crucial role of government payments for organic grazing livestock farms in the CR.

The same figure for organic farming payments (Figure 6) illustrates that their importance in general is much lower. Nevertheless, although organic farm-

ing payments only account for 10 to 15% of gross output, their importance as the share of the profit can be much higher. It becomes clear that with only one exception (CZ-B70), also organic farming payments are quite important for the economic success of typical organic farms.

An important issue regarding the future development of organic farming is the possible conversion rate of conventional farmers to organic production. One criterion for conversion is an expected better economic situation after the conversion than before. This is the case if the remuneration of own factors in organic farming is higher than in conventional farming. Own factors are land, capital and labour. We chose the remuneration of family labour as the relevant indicator. The return to labour is the profit plus the expenses for wages divided by all agricultural work units on the farm.

The return to labour in organic beef farming varies significantly between farms (Figure 7). There are very successful farms and farms which present results that are not satisfying at all, as is the case for the small cow-calf farm (CZ-B11) and the small dairy farm (CZ-D16).

If the return to labour turns out to be higher in organic than in conventional farming, then an economic incentive for conversion exists for conventional farmers. The higher the difference, the higher the incentive for conversion, and the higher the potential conversion rate will be. Comparing indicators of success between organic and conventional farms, the reference is of crucial importance. The underlying question should be: what would the organic farm look like if it was managed conventionally? So conventional farms should be comparable to organic farms

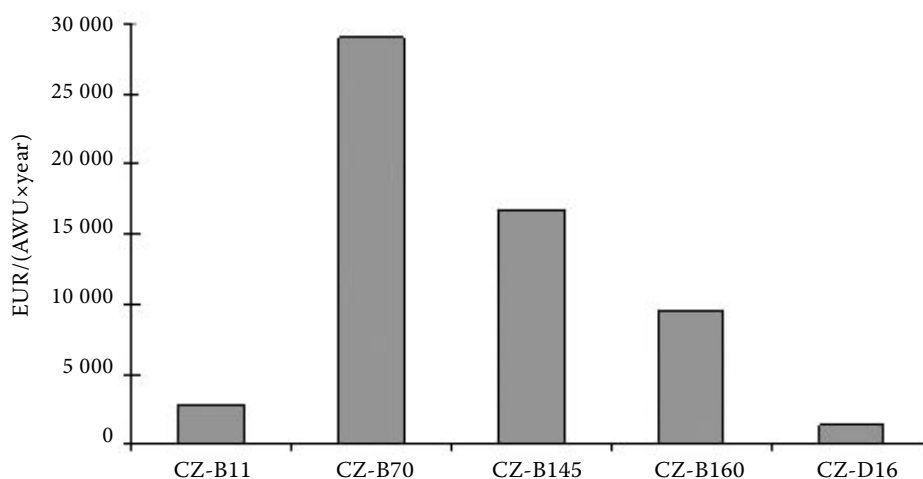


Figure 7. Return to labour in organic beef farming (EUR/(AWU*year)) (2003)

Source: Own calculations

with respect to region, to main farm activities and to factor endowment (see Offermann, Nieberg 2000). Unfortunately, statistical data for conventional farms are not grouped and analyzed as described above. That is why no direct comparison of the economic success of organic and of conventional farms was possible in this study.

To relate the results obtained in this study at least in some way to other data, the return to labour of typical organic beef farms is compared with the average income in all agriculture for the year 2003 drawn from the statistics (ČSÚ 2003b), which was at about 4 400 EUR per year and per AWU. It becomes obvious that the results from the organic cattle farms are mostly higher. As discussed earlier, this comparison can only give an idea of the economic performance compared to conventional farming. Conclusions concerning the incentive for conversion cannot be drawn from these numbers as specific criteria concerning farm organisation and region (see above) have to be considered.

CONCLUSION

In the Czech Republic, organic farming on grassland is much more important than on arable land. This has severe implications for the prospects of organic farming as the organic beef and milk markets are quite small in the CR. Organic processing and marketing opportunities are almost totally lacking, and at the same time, the export market for the named products is difficult in the old EU member states, too. No market driven development is to be expected, so that the importance of payments in general will remain rather high for organic cattle farms in the CR.

Five organic farm models representing a large part of organic beef farming in the CR were set up and show that organic farming is economically viable in most of the cases. Nevertheless, large differences in the economic performance at farm level are to be stated.

Organic farms are eligible for different kinds of payments: organic farming payments, agri-environmental payments, payments for less favoured areas. All the different payments add up, according to Czech legislation. Relating the payments to gross output it turns out that although organic farming payments are important for the economic performance of organic beef farms in the CR, the share of other payments is much higher and by that much more important. This is the case especially for cow calf farms, which are characterised by low input and which often are situated in less favoured areas (LFA), so that many of them receive other agri-environmental payments (mainly payments for the maintenance of grassland either meadows or pastures) and the LFA payments too. Organic farms are highly dependent on payments, which makes them vulnerable to policy changes. This applies especially as the situation on the markets for organic beef and milk products is still difficult.

What will be the future of support payments to organic farms? Payments for less favoured areas (LFA) already increased significantly beginning in 2004, decoupled direct payments according to the 1st pillar of the Common Agricultural Policy were introduced in the same year, agri-environmental payments for grassland remain mostly the same. Organic farming payments for grassland will remain at the same level, whereas payments for arable land and other more intensive land uses will increase by 75%, respectively more than 200% (see Table 4). As a result, it can be assumed that the financial situation at the farm level will improve

significantly. Given a higher liquidity, investments in production technology will become possible, improving productivity and maybe even quality.

As all the farms are eligible for higher payments (organic farming payments do not change for grassland), no additional incentive for conversion from conventional to organic farming is created by changes in payments after the accession.⁶ Nevertheless, our results show that the return to labour in organic farming can be quite high, so that with the increased extension more farmers might convert to organic farming. In cases where the lack of capital inhibited conversion to organic farming, conversion might become more likely as a consequence of higher liquidity at the farm level. Future research is needed on the impacts and likely adjustment strategies of changes in payments to organic farms.

For the time being, the situation of organic farming in the CR is almost completely decoupled from the situation on the markets, and nearly exclusively driven by policy. Usually a situation like that would be judged as not sustainable as it is highly dependent on policy, and policy might change. In the analysed case from the Czech Republic, sustainability might be given as payments have only a little impact on the kind of low input cow calf farming. That means, that only few costs of adaptation for the system to be eligible for the payments exist. At the same time, no changes in policy in the direction of lower payments for low input land use are to be expected in the future, as the maintenance of agriculture in less favoured areas is a policy objective in the "Horizontal Rural Development Plan" (HRDP) (MoA 2004e). Nevertheless, although the situation for a large part of organic farmers in the CR might be satisfying at the moment, developing the market for organic beef and for organic dairy products must be a central issue in the list of activities promoting organic farming and ensuring its sustainability in the long run.

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