

Chances and factors of economical farming

Možnosti a faktory šetrného hospodaření v zemědělství

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Abstract: The contribution is focused on an analysis of the existing forms of farming in Czech agriculture which are characterised by an economical way of farming on agricultural land. Forms, an extent and economic connection of these farming ways are included. Above all, it deals with the programs of extensive use of land in worse natural conditions, principles of organic agriculture, farming in areas with a special water regime and so on. These ways of farming have to be a part of the state agrarian policy and the connected financial participation of the state in their supporting.

Key words: farming on land, multifunctional agriculture, environment, intensification, organic agriculture

Abstrakt: Příspěvek je zaměřen na možnosti forem hospodaření v českém zemědělství, které se vyznačují šetrným způsobem využívání zemědělské půdy. Jsou uváděny formy, rozsah a ekonomické souvislosti těchto způsobů hospodaření. Jedná se především o programy extenzivního využívání půdy v horších přírodních podmínkách, o zásady ekologického zemědělství, o hospodaření v územích se zvláštním vodním režimem apod. Tyto způsoby hospodaření musí být součástí agrární politiky státu a s tím spojenou finanční účastí státu na jejich podpoře.

Klíčová slova: hospodaření na půdě, multifunkční zemědělství, životní prostředí, intenzifikace, ekologické zemědělství

INTRODUCTION

The concept 'farming on land' in itself should already follow an economical and profitable usage of a land as a non-renewable wealth of mankind. This approach has not been and also currently it is not applied automatically. It depends very much on the aim with which agricultural production is realised, who realises it and in which political-economical conditions it is realised. In this connection, a concept of the 'agricultural model' is deep-rooted which expresses a total approach to this branch. Shortly said, it deals either with a model oriented above all on the market and incomes of farmers are in a decisive level dependent on the realised production, or it is a model of the so-called multifunctional agriculture which stresses also the non-production functions of agriculture. The European model of agriculture which is applied in the EU countries strongly stresses the multi-functionality of agriculture.

AIMS AND METHODS

The aim of the article is an analysis of the current possibilities and forms of economical farming on agricultural land in the Czech agriculture and their economic connections.

The methodological procedure lies in the collection of the necessary basic documents of legal and other character which have relation to agriculture and the aim of which is to reach a positive influence on economical ways of farming on land.

Further, there is introduced an analysis of economic supports concerning the given topic and ways of their introduction in the agricultural practice.

ACHIEVED RESULTS

In the Czech Republic during the 90ies, substantial changes happened in the role and understanding of farmers mission. Reasons for a change of the role were in the changed political approach as well as in the changed economic conditions for this branch. The high degree intensity of agricultural production before the year 1990 was significantly supported by the state and in many cases it showed a negative influence on the environment. It was caused above all by high doses of artificial fertilisers, chemical protection means, usage of heavy machines in field works, insufficiently secured large-scale-capacity objects in animal production in relation to the environment and so on. An effort to get a maximal intensification of production was especially unsuitable in higher elevations and less favourable areas for agricultural

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production. That is why already at the beginning of 90ies there were efforts to use agricultural land more economically by various form of alternative agriculture as a contrast to conventional agriculture.

Organic agriculture

Under the concept of alternative agriculture, various methods of organic, biological or ecological agriculture are ranged.

Organic agriculture uses a closed cycle of nutrients and inputs from outside are limited. It is wide-spread in Great Britain.

Ecological agriculture prefers environmental aspects. A view of agriculture as an organic whole is not as important as the fact that it must not pollute the environment.

Sustainable agriculture represents an exclusion of usage of non-renewable natural resources.

Organic agriculture is defined by individual authors approximately by the same features which it has to show for this qualification. It includes for example care for land, ways of plant growing, breeding of farm animals, and many conditions which have to be observed.

The European Union regulation No. 2078/92 EEC includes the organic agriculture as a part of the Common Agricultural Policy of the EU.

A legal adjustment of alternative ways of farming was during 90ies in the Czech Republic delimited by the Ministry of Agriculture regulations and at a lower level, by various interest associations by setting of the relevant principles for these ways of farming in frame of these associations.

A complex legal adjustment in this area was brought by the Act No. 242/2000 Coll. about organic agriculture and the amendment of the Act 368/92 Coll. about administrative payments and Decree of the Ministry of Agriculture No. 53/2001 Coll. which completed the act about organic agriculture. There are anchored the definitions of concepts from the given area, set procedures and ways of farming and so on. The law is conformed to the rules of the European Union. The aim is production of healthy, highly evaluated and quality foods under the marking "the product of organic agriculture" (Table 1).

Table 1. Agriculture land in the CR under organic agriculture

| | Number of businesses | Acreage of agricultural land (ha) | Share in agricultural land (%) |
|------|----------------------|-----------------------------------|--------------------------------|
| 1990 | 3 | 480 | – |
| 1995 | 181 | 14 982 | 0.35 |
| 2000 | 563 | 165 699 | 3.86 |
| 2001 | 654 | 218 114 | 5.09 |

Source: Málek (2002)

Shares of cultures in agricultural land in organic agriculture: arable land 8.8%, permanent grassland 89.7%, permanent cultures 0.4 %, other 1.1%.

The present state in the Czech Republic is comparable with the European Union which, as a whole, shows 4% share of organic agriculture in the farmed agricultural land.

A problem in the given area is, for the present, a higher price of organic products but in spite of that, there is a significant increase of their consumption by our inhabitants, especially considering plant products.

A lower intensity of farming

A level of intensity of realised agricultural production has a very close relation to protection of the environment. It does not mean automatically that a higher intensity of agricultural production always affects healthy environment but there is a higher potential possibility of pollution of this environment. To remove also this potential possibility in specially sensitive areas like resources of drinking water, national parks, protected landscape areas and so on, special farming regimes are set for these areas.

In these areas, there are applied methodologies and procedures which regulate fertilisation of land, adjust ways of use of means for plant protection, set isolation distance from the resources of drinking water and so on. An enumeration of the introduced principles is set by the state by means of relevant regulations and it requires their abidance.

Economic connection of economical farming

From the above-mentioned characteristics of the organic agriculture and other special regimes of farming on land, it results that these ways of farming from the economic viewpoint will be at a certain disadvantage compared to the conventional agriculture. Therefore, it is in the interest of the whole society that all forms of farming, which lead to maintenance of the healthy environment and creation of a cultural landscape, were financially supported by the state.

During the last years, the government of the Czech Republic set annually supportive programs by the governmental regulation to support non-production functions of agriculture, to support activities participating in landscape maintenance and programs to support less favoured areas on the base of set criteria. These regulations stem from the regulation of the Council of the European Commission, the aim of which is to support a permanent settlement of the rural space, to maintain the landscape in a cultural state, to secure job opportunities for rural inhabitants and to ensure healthy non-harmful food.

The governmental regulation No. 505/2000 Coll. for the year 2001 included the following programs:

– Aid to support less favoured areas.
The aim of the program was to maintain rural landscape and its settlement by levelling incomes between the productive and less favoured areas in the CR. In total, 734 338 ha were supported in less favoured areas and further 8 420 ha in national parks and protected landscape areas. The volume of support represented 1.7 billion CZK which was 64% from all supports paid within that regulation.

– A change of the structure of agricultural production by grassing plots of arable land.

There were grassed 3 409 ha in total.

– Maintenance of grass growths by pasture of farm animals.

It deals with the plots of land less favoured for agricultural production. In 2001, there were maintained by pasture 461 107 ha grasslands.

– Subsidising losses from organic agriculture.

In 2001, there was supported farming on about 155 164 ha of land by the sum of about 168 million CZK.

Further, it dealt with the support of liming acid soil, establishment of the elements of ecological landscape stability and establishment of growth of fast growing wood plants. In the whole, within the mentioned governmental regulation there were paid in supports 2.9 billion CZK.

Besides the above-mentioned supports, there are provided financial supports in form of subsidies according to the § 2 art. 1 of the Act No. 252/97 Coll. “on agriculture” within the principles of the MA. These subsidies have a wide action and some touch also the economical farming on land. It is a program of support of ecological fuels use which was realised by support of the production of rape oil methyl-ester (MEŘO) and by support of the production of mixed fuel – bio-petrol. To the MEŘO production, there is connected also the financial compensation support for agricultural land set-aside.

In the set-aside system, it was possible to get 5–10% from the total acreage of the farmed arable land on which there was planted oil rape for the MEŘO production. Further, it dealt with programs of sowing plants for green fertilisation and energetic plants. The support was provided in the sum of 5 500 CZK/ha. Acreage of arable land under set-aside used for the mentioned plants reached

102 thousands ha in total in 2001 with the support of 550 million CZK. Financial support was provided on the condition that agricultural enterprises supplied 2.3 t of oil rape seed per ha for the agreed price to the State Agricultural Intervention Fund.

Also cow breeding without market milk production and pasture cattle breeding are supported. These programs serve to usage of permanent grass in less favoured areas.

CONCLUSION

During the 90ies, significant changes in thinking and in practical policy in relation to the environment protection occurred in the Czech Republic. In this trend, also changes in agriculture participated. Agrarian policy does not orient on a high intensity of production regardless of various natural conditions. Regarding the need of environment improvement, the philosophy of sustainable development of agriculture was adopted which already was and above all today is significantly supported by the state. Forms of supports take into account the multifunctional character of agriculture and the interest in maintenance of cultural landscape. The subsidy structure for Czech agriculture includes by 60% support of production functions and by 40% supports to the multifunctional character of agriculture. According to the available information, the present structure of the EU subsidies is in the ratio 80 : 20 in favour of production functions.

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