Potential for Hungarian Grasslands in integrated rural development

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Abstract: Sustainability and multifunctionality, two key principles, which will determine future development in any activities. On the bases of these principles, society as a whole has already outlined future expectations towards rural areas. Rural functions (economic, ecological and socio-cultural ones) have been declared in European Charter for Rural Areas. To what extend can different rural development initiatives meet these functions? The question may be answered by using the method of multifunctional rural resource analysis (NAGY, 2007). The paper is investigating the potential for Hungarian grasslands by using this methodology. It is concluded that our grasslands, as land use systems in their present conditions can participate in integrated rural development in the most balanced way compared to other land use systems in the county. Economically their potential is good. Ecologically their potential is outstanding. The socio-cultural potential of grassland use in Hungary is also outstanding due to the historical roots. As a future prediction the relative importance of the three grassland functions has been outlined in integrated agriculture and rural development.

Key words: sustainability, multifunctionality, grasslands, future potential

Introduction

The future scenarios of agriculture and rural development will be determined by two basic principles. These are sustainability and multifunctionality. Sustainability, which originally was referred to environmental issues, has got comprehensive approach by now. It includes not only environmental, but economic and social sustainability as well. It is a recent development, that society identifies its expectations towards the utilizations of different resources, towards the effects of different activities, or even towards the human individuals as well. These expectations are called as common functions, which should work in favour of society. In fact broadening the spirit of sustainability has multiplied the one-sided expectations and has led to a model of multifunctional mission. This specially refers to the future of agriculture and rural areas, as whole society nature of their mission is obvious. The multifunctional agriculture and rural development can be achieved if each branches of agriculture and each single actors of rural development can operate on multifunctional bases as well. That is the reason why elements of multilateral systems should be investigated individually. The objective of this paper is to look for potential role of Hungarian grasslands in multifunctional agriculture and rural development.

Material and methods

One million hectare existing grasslands, with their ecological conditions, practical situations and scientific opportunities will be considered. Widely known and technically accepted descriptions and statements as well as scientific references will be used in the investigations.

The definition of multifunctional agriculture and rural development will be cited from EUROPEAN CHARTER FOR RURAL AREAS (1996). This document outlines economic, ecological and socio-cultural functions for rural areas, including agriculture in modern and developed societies. Following these guidelines, grasslands as land use systems will be investigated with the multifunctional resource analysis method (*Nagy,* 2007). The target of the investigation is to find the economic, social and socio-cultural potentials of grasslands in integrated rural development and to compare grasslands with other land use systems in this respect.

Economical potential of Hungarian grasslands

Considering the ratio of our grasslands in land use in Hungary, grasslands are the third most important land use systems. Grasslands and grassland farming will be constant actors in rural areas and agriculture for some reasons: soils of our grasslands are of low fertility and so are not suitable for other land use systems; as a consequence of our EU membership, predictions regarding changes between different land use systems will result in increase of total grassland area in the country.

According to the different aspects of evaluating the economic potential of grasslands, judgements of investment and input needs are in favour of grasslands. As grasslands are

existing ecosystems there are no needs for investments (grass establishment, renovation etc.). The present farming practices use negligible farm inputs, so grassland systems are unique in this respect, and what is more, they can produce harvestable forage year by year without any inputs. As a result, in case of grasslands there are no needs for investment capital and do not have to face the problem of timing the input costs.

Aspects regarding outputs and returns of grassland farming show different picture. Although grasslands can produce harvestable forage without any inputs, the value of return from production in this case is fairly low compared to any other land use system in the country. This is due to the unfavourable ecological conditions of present Hungarian grasslands.

The social responsiveness to grassland use is positive. It is not a new, innovative land use system. Rural areas in the country have historical traditions in grassland farming. Labour for grassland farming is available in rural areas. However, technical skills for developed grassland farming systems may be missing in most rural areas.

Aspects regarding market conditions for products from grassland farming can be evaluated at a low rate in general. Unfortunately direct products of grasslands (green grass for grazing, grass hay or silage) are not marketable. Animal products from grasslands are already marketable products, but their production cycle is a relatively long procedure in time. Beef and mutton at the same time represent only small proportion in meat consumption per head and at the same time foreign market for these products is limited. Recently, however a promising market opportunity is opening for special animal products from grasslands. Labelled beef and mutton from organic grassland farming is a real chance for the future. Hungarian grasslands, as natural ones, are able to serve bio farming even in their present state.

Considering the relative importance of the previous aspects negotiated, it can be concluded, that grasslands may have average or even a bit higher potential in meeting the economic function of rural areas.

Ecological potential of Hungarian grasslands

The point which should be judged first is the effect of grassland use on the lifeless environment. As any other vegetation systems grasslands my have multiple positive effects on this environment. Utilizing carbon dioxide from the atmosphere and producing oxygen to it, grasslands are safeguards for the optimum balance of atmosphere components. They are enriching soils with organic matter. They can increase the resistance of soils against erosion and deflation, which has to be evaluated on sandy soils and on sloppy grasslands, occupying approximately 20% of Hungarian grasslands. In general grasslands are able to improve soil fertility, persistency of soil particles against water. No doubt, from the point of sustainability, grasslands are the most environment friendly land use systems (*Várallyai* and *Németh,* 1996). Grasslands with their most dense vegetation cover can serve as natural filters and may protect lakes and water flows from pollutions by run off water.

The effect of grassland use on human ecology is also favourable, but to a less extend. Pollution of dust in the air from grassland is zero, as soil cultivation is not practiced on grasslands and plant vegetation covers the ground through the year. This is unique compared to the most common land use systems, the arable lands in the country. The pollens from grasses may be a danger for the human ecology, but in case of farmed grasslands this danger may be minimized.

From the point of ecological function of grasslands, the role of grasslands in nature reservation is internationally outstanding. The proportion of grasslands in nature reservation areas is three times higher than their proportion in land use in the country. Presently about 30% of nature reservation lands are grasslands. Beyond that, 43% of animal and 63% of plant species, getting any nature reservation attention in the Hungarian *Red Book* (1989), requires grassland habitat. If diversified habitats and wildlife diversity are key points in sustainable and multifunctional development, Hungarian grasslands have to be given the highest ecological potential among land use systems.

Socio-cultural potential of Hungarian grasslands

Labour requirements of grassland farming are relatively low, so socio-cultural potential in this respect can be evaluated as negligible. However looking at the cultural heritage of grassland use (e.g. pastoral's folk) one can estimate grassland potential as outstanding. Material and non-material ethnographic heritage of grazier's culture (dressing, ancient Hungarian animal breeds, historical life style, regional architecture, folk songs, folk music etc.) are

Table 1. The potentials of different land use systems in meeting different expectation from society in multifunctional agriculture and rural development

Land use systems (A)	% of A from productive land[1]	Potential in meeting different functions		
		Production	Ecology	Amenity
Arable	58,3	*****	*/**	*
Garden	1,3	***	*	***
Fruit	1,3	***	*	**
Grape	1,2	***	*	****
Grassland	13,7	****	*****	****
Forest	23,0	**	*****	***
Reed	0,8	*	***	*
Fishpond	0,4	***	***	***

Indications for potential: * = negligable, ** = below average, *** = above average, **** = autstanding

[1]KSH, 2003. Source: Nagy, 2007

outstandingly attractive for rural tourism. Beyond these our grasslands can provide wide range of some other services for society. The Hungarian "Puszta", the open steppe landscape can even be considered as the image of the country (Hortobagy became a part of the World heritage in cultural landscape category). Our grassy landscape may serve different tourism branches (eco-, equestrian-, hunting-, rural ones). All together the socio-cultural potential of Hungarian grasslands can be evaluated as outstanding, as well.

Conclusions

The potential of different land use systems in rural development has formerly been estimated (*Nagy,* 2005).From the summarizing table of that study *(Table 1)* can be seen, that less frequent land use systems in the country can provide the widest opportunities for the multifunctional agriculture and rural development. Statements of the international grassland literature (*Hervieu,* 2002; *Carlier* et al., 2005.) may be referred to the Hungarian grasslands as well. Possibilities for grassland use in modern societies are very diversified, grasslands are the only land use systems, which can meet so many functions in serving human society.

Summary and future scenario

The relative importance of different grassland functions *(Figure 1)* for society reflects the future scenario for Hungarian grassland use. The economic potential can hardly be increased due to the existing socio-economic conditions in the country. Perhaps organic farming may have some prospects to improve the utilization of economic potential of our grasslands. The importance of ecological functions of grasslands is well known and broadly accepted in scientific circles. The future will harden this huge potential of natural-like Hungarian grasslands. The amenity services of grasslands as part of the socio-economic functions have been recognized by now. Changes in EU agricultural and rural policy towards the second pillar will enhance growing attention to better use of grassland products and services for the whole society.

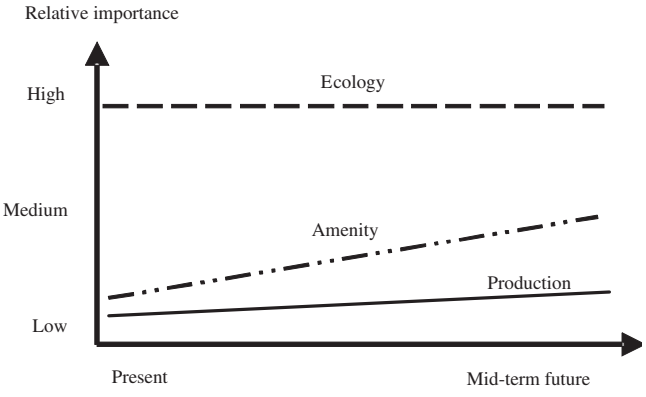

Figure 1. The relative importance of the three main grassland functions for societies and their future scenarios in Hungary

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