THE FACTORS OF COMPETITIVENESS OF HUNGARIAN BEEF CATTLE SECTOR

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Abstract- The factors of compatitiveness of Hungarian beef cattle sector
This paper analyses the position of the Hungarian beef cattle sector by using secondary data and determines the factors, which may influence profitability. The analysis includes the impacts of the recent and the present market processes, as well. The paper examines the beef cattle sector in economic and ecological aspects of sustainability, as these factors play an increasingly important role in the market.
The beef cattle sector was analysed in the following three aspects:

- role in food production,
- profitability, and
- sustainability in economic and environmental aspects.

Key words: beef cattle sector, income production, sustainability

THE ROLE OF THE BEEF CATTLE SECTOR IN FOOD PRODUCTION

Animal husbandry plays an important role in food production. After the political and economic changes in the beginning of the 1990ies, a significant decrease occurred in the Hungarian animal husbandry sector (Table 1), which was generated by the loss of the former eastern markets and the reduction of the effective demand.

Table 1: Changes of the number of animals in 1000 heads (1985-2009)

	1985	1990	1995	2000	2005	2009
Cattle	1766	1571	928	805	708	700
Pig	8280	8000	5032	4834	3853	3247
Poultry	38 376	31 121	27 549	19 422	22 968	18 907

Source: KSH, 2010

The quantity of the domestic meat consumption – similar to the number of animals – shows also a decreasing tendency (Table 2.). The beef consumption has been decreased to the one third, while the pork consumption to half quantity compared to the beginning of the examined period. The poultry consumption has been increased until 2000, and since then it has been reduced. Total meat consumption shows also a declining tendency in the examined period, except for the peak in 2000, which was followed by a significant decrease, below the former minimum level of consumption.

Table 2: Meat consumption in Hungary (kg/person) (1985-2009)

	1985	1990	1995	2000	2005	2009
Beef	8,7	6,5	6,8	4,3	3,1	2,6
Pig meat	43,1	38,8	27,1	28,0	26,7	27,2
Poultry meat	20,8	22,8	24,0	33,7	29,7	27,9
Total meat consumption	76,9	73,1	62,5	70,2	63,5	61,9

Source: KSH, 2010

The capacity of the eastern markets has been ceased by the political changes, but new EU markets have been opened. As a result of the BSE epidemic in 1996, the number of beef cattle was reduced by 1,9 million heads in the EU-15 member states, which made a 5% decrease of beef production. Forecasts say an additional 5% decrease of beef output up to 2014 (Table 3), therefore the internal consumption of the EU should be covered by increasing level of meat import (TÓTH, 2007).

Table 3: The beef consumption in the EU

	2005	2007	2010	2014
Total consumption (1000 t)	8445	8424	8310	8232
Consumption (kg/person)	17,3	17,1	16,8	16,6

Source: Tóth, 2007

Nearly 60% of the EU beef production is originated from the dairy sector as secondary product. In Hungary, this proportion is higher, that can be one of the reasons of the low domestic beef consumption. Due to the high beef prices and the low beef consumption habits the market of domestic consumers will probably not increase in the near future (POPP-POTORI, 2009; BUZÁS-SZABÓ, 2009).

The number of beef cattle in Hungary – similar to the EU – shows a declining tendency. The domestic beef consumption is very low; therefore a high proportion of the Hungarian beef production is to be exported. The export of live animals is the most significant proportion of beef export (Table 4), which produces less income, than the export of processed meat products. The most important destinations of beef cattle export was Greece and Austria in 2008. The export prices have been raised by 8% while domestic prices by only 4%; thus, the export of live cattle has grown further. The destinations of frozen beef are Italy, Romania and Denmark. (POPP-POTORI, 2009)

Table 4: Hungarian beef export (2003-2008)

Product	Export (net weight in 1000 kg)					
	2003	2004	2005	2006	2007	2008
Live cattle	15 169,5	18 789,0	22 210,2	27 029,0	31 350,1	32 936,2
Fresh or iced beef	7 526,5	9 959,3	8 959,3	8 507,8	10 056,6	12 770,2
Frozen beef	2 644,1	2 653,0	1 517,0	1 042,5	1 484,3	2 997,0
Total beef export	40 509,7	50 190,3	54 440,0	62 135,4	73 082,9	80 359,5

Source: KSH, 2010

Since the healthy nutrition methods have become more popular, the importance of food products from ecological farming systems has grown all over the world. The ecological animal husbandry is connected to extensive farming methods. As a result of the use of ecological farming methods, the importance of the old traditional Hungarian breeds has grown. Only 10% of the domestic beef cattle stock was certified as bio product in 2001 and nearly the total of the ecological production was exported (BODA, 2001). The need for ecological beef cattle products shows an increasing tendency (MÁRAI, 2008).

PROFITABILITY OF THE BEEF CATTLE SECTOR

Enterprises of the beef cattle sector are generally operated with low profitability. The main revenues of the sector are derived from the production value of slaughtered animals. The price of slaughtered animals has increased between 2004 and 2006 (Table 5); the cost of production of live weight has also increased, while the gross margin – in contrast with the 2003 data – was positive in this period.

Table 5. Producer prices of beef according to carcass types (SEUROP), costs of live weight production and gross margin values (2004-2006)

HUF/kg	2004	2005	2006
Average R class	488,52	625,78	629,04
Average O class	470,23	588,42	622,24
Average P class	462,43	586,01	616,28
Average of E-P	472,37	602,02	623,78
Live weight own cost	364,55	367,40	371,98
Gross margin	49,98	101,32	98,58

Source: Own construction by AKI PAIR (2010) and BÉLÁDI-KERTÉSZ (2006, 2007)

The most important influencing factor of profitability in the beef cattle sector is daily growth, which is mostly determined by feeding methods. The higher the daily growth, the lower the prorated cost of fattening, as the fattening period is shortened; although the price of compound feeding stuffs exceeds the price of forages (BUZÁS-SZABÓ, 2009). Profitability is nearly impossible without subsidies under the present economical circumstances. The financial contributions (such as different premia and headage payments) have been general in the EU for a long time. The extensive (grazing) animal husbandry methods play an important role in landscape protection and rural development and also in developing the retention of rural communities, which makes a reasonable theoretical base of the different supports (STEFLER, 2002).

The Hungarian beef cattle sector is not viable without the EU or national (top-up) subsidies because a great proportion of the farms is not able to produce enough income to cover the production costs, even in ideal climatic circumstances. This situation is illustrated in Fig. 1, which is adapted from a previous study that examined the cattle keeping capacity of 100 ha land in case of drought (the yearly rainfall is less than 500 mm) and under favourable weather conditions. As it is shown in Fig. 1, the total revenue without subsidies cannot cover the total costs. The net income is neither increase even under favourable weather conditions.

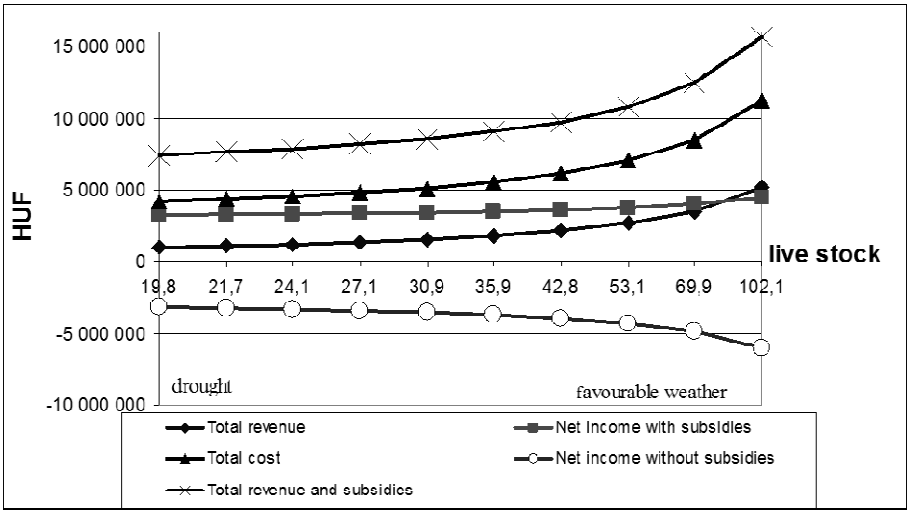

Figure 1. Animal keeping capacity of 100 ha grassland under different weather conditions
Source: Mészáros (2010)

The different payments supporting beef cattle sector – financed by EU and national sources – and the related decrees are summarized in Table 6.

Table 6: EU and national top-up payments in the beef cattle sector

Payment	**Amount** (HUF/head)	**No. of Decree**
Suckler cow premium coupled to production	31 500	30/2006 (IV.12.) 82/2005 (IX.15.)
Suckler cow premium based on references	9350	29/2007 (IV.20.)
Extensification payment	17 050	42/2008 (IV.4.)

Source: own construction by Ministry of Agriculture and Rural Development decrees

Additional support may be claimed by the farmers for grasslands and pastures, in accordance with the regulations of the Ministry of Rural Development (the former Ministry of Agriculture and Rural Development). Compensatory payments may be applied for grasslands and pastures of unfavourable areas, areas under Natura 2000 protection and areas under agri-environmental schemes (extensive grassland management).
The financial supports of agricultural production are contributed by the European Agricultural Found for Rural Development in the 2007-2013 financial and programming period. In Hungary the New Hungary Rural Development Programme (NHRDP) was prepared on the utilization of the financial support of the EAFRD, with the following main objectives: to establish a competitive and sustainable agriculture with viable farm structure and rational land use, to support diversification of enterprises and to improve marketing approach and knowledge level in agricultural production (MAGYAR MEZŐGAZDASÁG ÉS ÉLELMISZERIPAR SZÁMOKBAN, 2009).

SUSTAINABILITY ECONOMIC AND ENVIRONMENTAL ASPECTS

Sustainable agricultural production – especially under the present economic and ecologic conditions – is an inevitable strategy for the future. Besides the animal keeping capacity of the land, which is determined even by weather circumstances, the environmental aspects should also be taken into consideration. These requirements may improve the spread of ecological farming technologies. In economical aspects, the production of – primarily extensive – species may be reasonable in such areas, which may produce lower income but at lower cost level. The grasslands of the Great Hungarian Plain have considerable natural and touristic values. These values may be endangered by the decrease of grazing and by the fragmentation of the pastures. The use of extensive production methods is common at areas with low production capacity (Fülöp, 2009). In Hungary, 72% of the total agricultural land is suitable for agricultural production, of which grassland and pastures represent only 13% (KSH, 2010).

The yield of grassland generally is not offered for direct sale, this output is mainly utilized by transformation in the animal husbandry sectors. In line with the decrease of the number of grazed animals, the deterioration of the grasslands has been started. The former grassland areas have been covered by weed and bush population. The additional inputs for increasing the yields, such as regular nutrients substitution, have been cancelled for financial reasons (SZÉLES, 2001).

In 2009 a study was prepared model calculations in order to examine the animal keeping capacity of the Hortobágy area under different weather conditions, based on the data of a certain farm (Fig. 2). In this study the decision criterion in the calculation of optimal livestock number was maximum income. In the calculations the grazed and harvested yield of grassland (160 ha) was taken into consideration both in drought and favourable weather conditions. The starting point of the examinations was that specific livestock number, which summer and winter fodder demand may be covered by grassland at both weather conditions, i.e. ecological animal keeping capacity. (MÉSZÁROS-LENCSÉS, 2009).

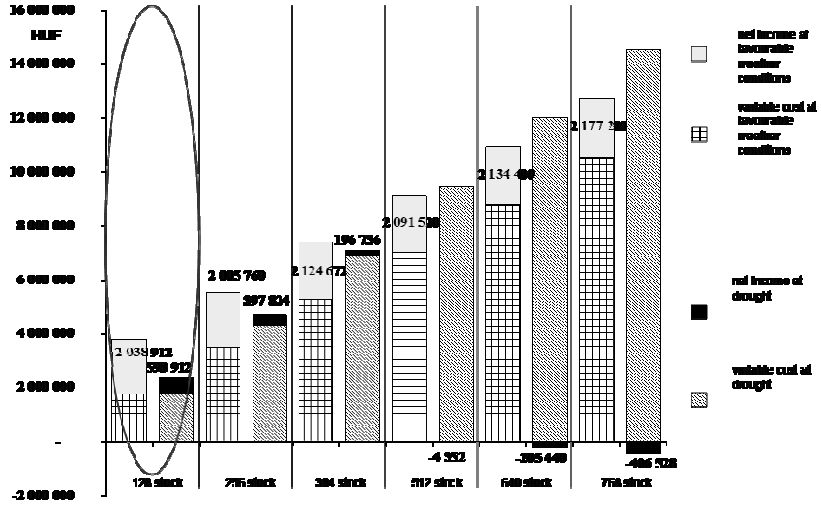

Figure 2. The income of extensive beef cattle production by different livestock number in different weather circumstances
Source: MÉSZÁROS-LENCSÉS (2009)

The minimum of the ecological animal keeping capacity of the examined grassland is that livestock number, which may be supplied by the winter hay production of the grassland in drought, while its maximum is the livestock number related to summer grass production yields under favourable weather conditions.

As a result of the examination of ecological animal keeping capacity it may be stated, that the net income is negative in the case of drought at any stock number even with subsidies. For this reason the used decision criterion (maximum of income) has been changed in such way that the loss of drought year should be covered by the positive income of the year with favourable weather. The maximum livestock number, where this condition could be realized, was 32 beef cattle. (MÉSZÁROS-LENCSÉS, 2009)

SUMMARY

The Hungarian beef cattle sector will probably keep its export oriented role in the future. The domestic beef consumption has decreased in the past decades and this tendency is not expected to be altered, either by the change of consumers' behaviour or by the reduction of the prices. Nevertheless, the beef cattle sector has come into the front in the recent years in aspects of landscape protection. The traditional old Hungarian species may have greater importance in the future, as a result of the supported extensive methods based on the use of grasslands and pastures.

The producers of the beef cattle sector may apply for several supporting measures, financed both by EU and national financial sources; without this support the beef production would produce huge losses for the enterprises of the Hungarian beef cattle sector. This situation may be worsened by the implementation of the SPS system, particularly for beef producers without land. The solution could be to establish co-operation and to strengthen the vertical and horizontal integration; it would probably improve the deal position of the stakeholders of the beef cattle sector and also the profitability of the sector by producing processed products of higher added value.

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