

Economic position of beef sector in Hungary

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Summary

EU membership affected the rentability and the reform will also have a great influence on the economic position of cow-calf unit and the finishing cattle production. For more information an economic analyse of input and output data were done in different production systems. Different levels of costs, weaned calf and finishing cattle prices and subsidy were considered during the study. The results show that the profitability of suckler calf production of very extensive system can be better than in less extensive system. Without subsidy at a low calf price profit of extensive system is zero or negative. In case of „good” calf price (2.0-2.5 €/kg) and the current EU subsidisation level cow-calf unit with 50 cows can give a reasonable profit that can make a family's living. Cattle fattening and producing finishing bulls in case of approximately 2 €/kg production cost, 250 kg weaning weight, 550 kg slaughter weight without subsidization is profitable only in case of low calf price (2.0 €/kg or lower) and high slaughter cattle price (1.6 €/kg or higher). With special premium fattening can be profitable even in case of high calf price (2.6 €/kg) and low slaughter cattle price (1.4 €/kg). Due to the decreasing payment by the EU reform the profit, position and competitiveness of beef sector will decrease.

Key words: cow-calf production, cattle fattening

The profitability of beef cattle sector depends on the input costs such as feed, labour, materials and output value as calf, heifer, culled cow, prices moreover on the subsidisation. Because of the low subsidy and bad profitability situation of this sector beef cattle stock has decreased in Hungary during the past two decades. From May 2004 Hungary has become member of the EU and Hungarian beef cattle farmers might receive 55% of EU subsidies (25% from EU and 30% from the national budget) in 2004, 60% in 2005, and 65% in 2006. There are reasonable quotas for beef sector (117 000 head suckler cow premium, 94 620 special beef (fattening cattle) premium, 141 559 head slaughter premium for cattle, 94 439 head slaughter premim for calves) for Hungary, but practically no direct payments for dairy and dual purpose herds. There is a suggestion for small cattle holders keeping dual purpose Simmental type Fleckvieh cows to give up milk production and change their stock for beef production.

Suckler cow unit

There are challenges and questions to Hungarian beef cattle farmers:

- 1) Whether a beef cow with 0.8-0.9 weaned calf per year without milk yield can give enough income that covers the yearly costs of cow-calf unit?
- 2) Are beef cattle farmers able to apply such low-input ways of cow-calf operation that can results profit?

For answering these questions input and output data were collected in different beef farms. Based on these data and subsidy level furthermore the expected weaned calf prices economic analyse was made to evaluate profitability of calf production by suckler cows.

The results show that output of a beef cow without subsidisation is 3-4 times less, and with subsidisation is 2-3 times less than that of a dual purpose cow. A farmer will lose 1000-1265 €/cow if he gives up milk production and switches to suckler cow production.

Farmers do not have influence on subsidy level and on weaned calf price, they have only a chance to increase weaning weight and decrease input costs such as costs of feeding. Creep feeding is a good way of increasing weaning weight, but that increases input costs, as well. For decreasing input costs extension of grazing period with utilisation of by-products of stubble of crop and corn field by grazing can be a possible practice.

In order to evaluate input and output costs of cow-calf operation (suckler cow unit) two models, a very extensive „A” and an extensive „B” were compared. In both systems cows were kept outdoor all year round. Model „A” included one calving season (spring), longer grazing period, utilisation of by-products (crop and corn stubble) after harvesting by grazing. Only few amount of hay was utilised for feeding. In model „B” two calving seasons (spring and autumn) were applied. For nutrition, shorter grazing period on grass and stubble fields more hay and concentrate were fed.

Table 1. Some results of two models of cow-calf operation unit

Model	Model “A” very extensive	Model “B” extensive
Number of cows	50	50
Culling rate, %	20	20
Calving rate, %	80	92
Total retail live weight/cow, kg	236	285
Annual production cost, €/cow	394	485
Income without premium, €/cow	404	460
Profit, €/cow	10	-25

At a similar weaned calf price without subsidisation the retail income (460 €/cow) of extensive („B”) was by 14% higher than that of (404 €/cow) the very extensive („A”). At the same time the annual production costs of model „B” (485 €/cow) was by 23% higher than that of model „A” (394€/cow). As a result the profit of model „B” was -25 €/cow, while that of „A” was +10 €/cow (*Table 1*).

Also comparison of „A” and „B” model was made in the case of different calf prices (1.5, 1.8, 2.1, 2.3 €/kg) at three levels of subsidisation (80-, 160- and 240 €/cow). Results show better profitability in very extensive („A”) system, however calf production was a little bit lower than in extensive („B”) system. The profit in very extensive system ranges from 14€/cow to 258 €/cow, while that of the extensive system from -34 €/cow to 223€/cow (*Table 2*).

Table 2. Profit in case of two models (€/cow)

Premium, €/cow	Weaned calf price, €/kg			
	1.5	1.8	2.1	2.3
Model “A”				
80	14	42	70	96
160	94	122	149	176
240	178	202	229	258
Model “B”				
80	-34	-2	30	63
160	46	78	110	143
240	126	158	190	223

Conclusions:

- Profitability of very extensive system can be better than in extensive system.
- Without subsidy at a low calf price profit of extensive system is zero or negative.
- At 1,8€/kg calf price the profit of very extensive system is as high as in extensive system at 2.1 €/kg weaned calf price.
- In case of „good” calf price (2.0-2.5 €/kg) and the current EU subsidisation level cow-calf unit with 50 cows can give a reasonable profit that can make a family's living.

Cattle fattening

Cattle fattening and selling of finishing bulls (550-550 kg) was profitable activity in 1970-80's in Hungary. Afterwards because of the Common Market Organization of beef and veal and subsidization system weaned calf price increased while finishing cattle price decreased fattening became unprofitable and many farmers gave up this activity and sold weaned beef calves directly abroad.

Due to the EU membership there is a special beef premium (premium for fattening) 140€/fattened bull or steer in 2004 and higher amount later. Farmers would like to know whether this subsidization improves the profitability of fattening and results enough profit.

In order to answer the question an economic investigation was made. The principle of this study was that profitability of fattening depends on 1)weaned calf price, 2)costs of fattening and 3)slaughter cattle price.

The mentioned prices and costs were collected from different farms, retailers and slaughter houses. According to the collected data weaned calf price was 2.0-2.6 €/kg, finishing cattle price 1.2-1.6 €/kg and cost of fattening 1.1-1.4 €/kg in autumn 2004. Based on these data an economic simulation was carried out for predicting the profit of fattening in case of 1296 different variations.

Table 3. Profit of cattle fattening without special premium (€/kg live wt)

Calf price, €/kg	Slaughter cattle price, €/kg			
	1.2	1.4	1.6	1.8
1.6	-0.10	0.01	0.12	0.23
1.8	-0.15	-0.04	0.07	0.18
2.0	-0.20	-0.09	0.02	0.13
2.2	-0.25	-0.14	-0.03	0.08
2.4	-0.30	-0.19	-0.08	0.03
2.6	-0.35	-0.24	-0.13	-0.02

Table 4. Profit of cattle fattening with special premium (€/kg live wt)

Calf price, €/kg	Slaughter cattle price, €/kg			
	1.2	1.4	1.6	1.8
1.6	0.15	0.26	0.37	0.48
1.8	0.10	0.21	0.32	0.43
2.0	0.05	0.16	0.27	0.38
2.2	0.00	0.11	0.22	0.33
2.4	-0.05	0.06	0.17	0.28
2.6	-0.09	0.01	0.12	0.23

Three variations of weaning weights (225-, 250 and 275 kg), 3 variations of final fattening weights (500-, 550- and 600 kg), 3 variations of fattening costs (1.0-, 1.2- and 1.4 €/kg), 6 variations of weaned calf prices (1.6-, 1.8-, 2.0-, 2.2-, 2.4- and 2.6 €/kg), 4 variations of slaughter cattle prices (1.2-, 1.4-, 1.6-, 1.8 €/kg), 2 variations of payments (without and with subsidization) were considered when profit was calculated.

Altogether 48 variations calculated with mean values of weaning and final weight and cost of fattening considered without and with special premium. Results are summarized in *table 3*, and in *table 4*.

As data show there is no profit of fattening in most of cases if there is no subsidization while this activity is profitable when premium is considered. It can also be seen that the profit of cattle fattening is higher if slaughter cattle price is increasing and weaned calf price is decreasing. Higher the weaned calf price or lower the slaughter cattle price lower the profit of fattening is. Without subsidization a reasonable profit can be achieved only in case of low calf price and high slaughter cattle price. With subsidisation cattle fattening is profitable in most of the cases. Zero or negative profit can be realised only in case of very high weaned calf price and very low slaughter cattle price when weaning weight, final fattening weight and cost of fattening are an average.

Conclusions

Cattle fattening in case of approximately 2 €/kg production cost, 250 kg weaning weight, 550 kg slaughter weight

- without subsidization is profitable only in case of low calf price (2.0 €/kg or lower) and high slaughter cattle price (1.6 €/kg or higher).
- with special premium is profitable even in case of high calf price (2.6 €/kg) and low slaughter cattle price (1.4 €/kg).

References

- Szabó, F., S. Sebestyén: Organisation of beef cattle breeding in Hungary. 34th IC Session and INTRBULL Meeting. Suusse, Tunisia, May 28- June 3, 2004.
- Szabó, F.: Húsmarhatartás legelőn. Hegyvidéki gyepgazdálkodási szimpozion. Sapientia Erdélyi Magyar Tudományegyetem Csíkszereda, 2004. július 5-10.
- Peskovícová, D., E. Krupa, J. Dano, J. Kica, M. Wolfová and L. Hetényi: Economic weights for beef traits in the Slovakian Simmental population. Book of Abstracts of the 55th Annual Meeting of the European Association for Animal Production. Bled, Slovenia 5-9 September, 2004. 195 .p.
- Mihina S., D. Dinev, J. Huba, V. Juskiene, A. Jemeljanovs, M. Klopčic, V. Matlova, E. Orgmets, P. Slosarz, F. Szabó, N. Todorov: Trends in the transformation of livestock systems in Central and Eastern European countries. Book of Abstracts of the 55th Annual Meeting of the European Association for Animal Production. Bled, Slovenia 5-9 September, 2004. 336. p
- Wagenhoffer, Zs., F. Szabó, Gy. Buzás: Current situation and prospects of Hungarian small scale beef cattle farms. Book of Abstracts of the 55th Annual Meeting of the European Association for Animal Production. Bled, Slovenia 5-9 September, 2004. 337.p.
- Szabó, F., Gy. Buzás, Zs. Wagenhoffer: The effect of subsidization and market price on the profitability of beef calf production in Hungary. Book of Abstracts of the 55th Annual Meeting of the European Association for Animal Production. Bled, Slovenia 5-9 September, 2004. 338.p.
- Szabó, F., Gy. Buzás, Zs. Wagenhoffer: A húsmarhatartás fejlesztési lehetősége. XLVI: Georgikon Napok Keszthely. Új kihívások, új lehetőségek a mezőgazdaságban. Konferencia kiadvány. Keszthely-2004. szeptember 16-17. CD + 20.p.
- Szabó, F., Gy. Buzás, Zs. Wagenhoffer: A támogatás és a választott borjú ár hatása a húsmarhatartás jövedelmezőségére. XXX. Óvári Tudományos Napok Kiadványa. Mosonmagyaróvár, 2004. október 7. 69.p.+ CD
- Buzás, Gy.- Palkovics, M.- Szabó, F. :Change of the structure of Hungarian cattle production during the EU membership. Workshop of the Agricultural University of Nitra, Slovakia 19-20 May, 2005