Economic necessity for developing the milk sector

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SUMMARY – The Merinos dominating in the Hungarian sheep industry and the profitability of sheep production is not as high as would be necessary. Economic analysis was made to find out the possible break-even points. According to the results, the increase of milk production might be the key to solve this problem, but some conditions should be considered. Regarding the data presented the possible conclusions might be summarized as follows: Enlarging the stock without improving the phenotypic background is not profitable. This method will lead to a deadlock. The utilization of milk breeds under the present conditions could be realized: (i) if the costs of changing the breeding animals could be covered from other sources, since national sources are not available; (ii) if the attitude of the managers and employees of milk sheep farms could change; and (iii) if the price of milk was reasonable and the state purchase prices could reach the average prices of the EU (1 Euro/litre).

Key words: Sheep milk, cost of production, reserves, possible improvements.

RESUME – *"Besoins économiques pour le développement du secteur laitier". En Hongrie, la race mérinos domine dans le secteur du mouton. La rentabilité des produits n'atteint pas le niveau exigé. Nous avons fait des analyses économiques pour découvrir les solutions possibles. Il semble que l'augmentation de la production du lait soit la clef de la solution du problème. En considérant les renseignements, les conclusions suivantes peuvent être tirées : L'augmentation du troupeau de moutons n'est pas rentable sans l'amélioration du phénotype. Cette méthode /arrive au point mort. L'utilisation des races laitières est rentable : (i) si on pouvait subvenir aux frais du changement des animaux reproducteurs, car on ne dispose pas d'autres ressources ; (ii) si la qualification des fermiers et des travailleurs pouvait être élevée ; et (iii) si le prix du lait était plus favorable et le prix d'intervention atteignait le prix de marché européen (1 Euro par litre).*

Mots-clés : *Lait de mouton, dépenses de production, réserves, possibilités d'amélioration.*

Introduction

The Merinos had the predominant role in the number of sheep population in Hungary. In this multipurpose breed the milk production ability was low. The economic situation of the Merino industry was quite risky, because of limited prolificacy – and meat production – as well as low wool prices, that's why the increase of milk production could be the key to increase the profitability of sheep sector.

Materials and methods

Based on the cost and production data received from the Hungarian Sheep Products' Council an analyses were made to find out the reserves in costs and the possible direction of improvements.

Results and discussion

The production costs have been increased more than two times higher in the Hungarian sheep sector, due to the inflation process of the last 4 years.

Nowadays, the breeding cost of one ewe was 40-72 Euro and there were not many considerable resources to reduce it (Table 1). It could be expected that it would remain around the average of 52 Euro in the future, but the yearly inflation has always to be added. It showed that sheep breeding would not be profitable in Hungary if the outputs did not increase.

Table 1. Cost of a ewe (source: Nábrádi *et al.*, 1997)

Cost	Total (Euro)	Reserves in costs	Direction of improvement
Cost of materials	31.92	0	±
Self produced foodstuff cost	11.76	0	±
Purchased foodstuff	11.60	0	±
Sanitary materials, medicines	1.00	0	±
Energy costs	0.80	0	±
Cost of insemination or ram breeding	1.04	–	+
Breeding cost of ewe replacing ewes and the value difference of sold and shoddy ewes	4.00	–	+
Other material cost	0.72	0	±
Staff cost (wages of outside labour)	5.76	±	±
Social security	2.40	±	±
Depreciation, maintenance	1.20	0	+
Machinery costs	2.00	0	+
Tractors	0.40	0	+
Lorries	0.40	0	+
Other	1.20	0	+
Other direct costs	15.80	0	+
Other services (veterinarian)	0.80	–	+
Transportation by other party	0.20	0	+
Leasing costs	1.40	–	+
Insurance costs	1.40	–	+
Interest costs	12.00	±	+
Other costs	1.20	–	+
Overheads	1.20	±	+
Total costs	60.28	–	+

There were many resources for increasing the outputs, the phenotypic lag was considerable (Table 2). We believed that the best possibilities for improvement were on the most undeveloped area, which was milk production. The effect of the relatively high production costs of milk production on the profitability had to be evaluated differently. The level of intensity which was the cost and profitability increasing effect, regarding the level of production, provide an other way of evaluation.

Table 2. Reserves in increasing revenues (source: Nábrádi *et al.,* 1998)

Valuators	Milk	Number of lambs	Wool
Present yield	20-30 (l)	1	4 (kg)
Potential yield	150 (l)	2	3 (kg)
Reserves of yield	500-750 (%)	100 (%)	–25 (%)
Reserves of selling time	–	40 (%)	20 (%)
Reserves of sold weight	–	40 (%)	–
Quality	40 (%)	10-15 (%)	20 (%)
Reserves of processing	20 (%)	–5 (%)	20 (%)
Quantity	10 (%)	10 (%)	10 (%)

The turnover could be increased through enlarging the flock only (regarding a given way of use), without improving the genetic and phenotypic background, or through improving the genetic potential

and increasing the level of production cost/production value. Both methods had to be evaluated differently.

What was the economic difference between the two methods?

Through milking Merinos, without improving the genetic and phenotypic background, the lambing periods could not be increased, and the favourable effects of frequent lambing – reflected by its better market conditions and periodically higher prices – could not be utilized.

Basically, neither the level of breeding – in addition to the development of milking and milk processing technologies –, nor the level of feeding would change. On the contrary, the increase in the turnover – regarding 20-30 l milk – could be 10-16 Euro. In this production level, milking showed deficit.

In the case of intensive development, the costs of changing the breeding animals had a direct effect on the production cost, and the investment costs of milking and milk processing had also to be considered. The fodder requirement was increasing in parallel with the level of milk production (over 100 l) with about 60 kg forage and the quality of bulk fodder had also to be improved. The disadvantages of cyclicism in selling lambs for meat purpose occurred in the sale, as well (Table 3).

Table 3. Advantages and disadvantages of milking merinos

Advantage	Value	Disadvantage	Value
Extra turnover from milk	+10.00 (Euro/year)	–0.2 lamb on an average	–8.00 (Euro/year/ewe)
Market position of milk was more stabile	–16.00 (Euro/year)	Additional investment (milker, milking barn)	–0.40 (Euro/year/ewe)
		Less adaptability to the market (rough estimation)	
		Extra labour cost	2.40 (Euro/year/ewe)
		Extra energy	0.20 (Euro/year/ewe)

On the other side the turnover from the milk was 50 Euro per ewe per 100 l good quality milk. According to our calculations, the balance of specialization should be positive when 73.6 l milk could be sold in the case of a common way of specialization towards milk production (Table 4).

Table 4. Advantages and disadvantages of establishing intensive milk sheep farms

Advantage	Value	Disadvantage	Value
Extra turnover from milk	48.00 (Euro/year)	–0.2 lamb on an average	–8.00 (Euro/year/ewe)
Market position of milk was more stabile	64.00 (Euro/year)	Additional investment (milker, milking barn)	–0.40 (Euro/year/ewe)
		Less adaptability to the market (rough estimation)	–8.00 (Euro/year/ewe)
		higher feeding costs	–12.00 (Euro/year/ewe)
		Charge between the inventory and sale price of breeding animals	–8.00 (Euro/year/ewe)
		Extra labour cost	+8.00 (Euro/year/ewe)
		Extra energy	0.40 (Euro/year/ewe)

The considerably low price of milk in both relative and absolute sense had also contributed to this unfavourable result. While the price of 1 kg extra live lamb was 2.40 Euro, the price of 5 l milk was 2.40-2.60 Euro (the lamb produces 1 kg live weight from 5 l milk approximate). Thus, milking would have no use until the ratio, regarding the values of both products, was not favourable from economic side.

References

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