

Competitiveness in the Hungarian Mangalica Pig Sector

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Abstract. The competitiveness of Hungarian animal breeding sector in international aspect has significantly decreased after the EU accession by 2004. The reasons of it are the obsolete technology, the high production costs, the lack of contractual relationships, the low purchase prices and the non-compliance of the EU's requirements. These are the characteristics of the key sectors in Hungarian animal husbandry. This study wants to find out whether these factors are also important in a smaller livestock sector. Mangalica pig has a special significance because it is an ancient species, which became world famous by the Spanish Serrano ham-factory due to its high quality of meat and the premium products made from this pig. In Hungary there are 109 mangalica breeders with about 6400 sows struggling to survive, promote the reputation of mangalica pig, and expand in foreign markets of their products. Present study focuses on the competitiveness of Hungarian mangalica pig sector and the main determinants of its competitiveness. The main objective of the study is to present a comprehensive SWOT analysis with a secondary research and interviews of the players in the sector. After the exploration of the strenghts, weaknesses, opportunities and threats it is set up a sectoral problem-tree, which is completed with an objectives tree. This strategic analysis is an useful tool for the decision makers in the mangalica sector to improve their competitiveness in the national and foreign markets.

Keywords: mangalica pig, SWOT analysis, problem-tree, objectives-tree

INTRODUCTION

The animal husbandry and within it the pig-breeding has a significant role in the Hungarian agricultural sector (Szöke *et al.*, 2009). The livestock of Hungary has decreased since 2004 the accession to the European Union, that was drastic in case of pig-breeding (Nagy *et al.*, 2010). On the basis of Hungarian Central Statistical Office data in Hungary there were almost 5 million pigs before 2004, but at present there are 3 millions (CSO, 2012). The Hungarian mangalica pig has a special significance in our animal husbandry sector, because as a native pig it is substantial to preserve and keep in breeding of this species. But its economic importance increasing continuously due to the growing demand in the domestic and especially in the international markets. It became world famous by the Spanish Serrano ham-factory due to its high quality of meat and the premium products made from this pig (Magyar, 2005). In Hungary there are 109 mangalica breeders with about 6400 sows struggling to survive, promote the reputation of mangalica pig, and expand in foreign markets of their products.

The competitiveness of Hungarian animal husbandry in the international market had drastic change during the past years thanks mostly to our EU's accession. The obsolete technology, the worse natural indicators, the high production costs, the low purchase prices, the lack of contractual relationships and the non-compliance of the EU' requirements are the main competitive disadvantages of the Hungarian agriculture (Udovecz *et al.*, 2009, Popp – Nyárs, 2009, Kovács – Balogh, 2011). In case of mangalica it is hard to speak about competitiveness in national or international aspect, because as a native pig it has breeding

stock only in Hungary – although many of the breeders from Europe and also from overseas ask for this pig to buy it – and it creates a monopolistic situation that in the European Union there are no competitors of it (Szakály *et al.*, 2009). Despite of it, it is worth to examine that in a small segment like this which kind of problems it has and what type of factors play a role to operate efficiently. The mangalica segment „stands on three legs”: there are many small scale farmers, whose have only a few of mangalica breeding animals. They are those farmers who have a special significance because of the organic farming and the rural tourism. The mid-size farmers with 30-100 sows can produce surplus next to the own consumption. They play an important role in the domestic production and also in the gene preservation. The third „leg” are those 4-5 large-scale producers, who own the 80 % of the certificate of fattening pigs, they produce mainly for the international markets, the large supermarkets in standard quality. These three pillars need to cooperate to produce efficiently even they are small, mid or large farms. The small and the mid-sized producers breed pure-bred mangalica in extensive or semi-intensive keeping method, but with it they can't supply the foreign markets. The other hand in the large farms it is bred by crossed mangalica with Duroc pig and they target the foreign markets with always standard quality and adequate, continuous quantity (NAMB, 2012). Within this segment there are so many competitive disadvantages which we can explore and eliminate to improve the competitiveness of small and mid-sized farms in the domestic markets. Therefore the aim of this study is to analyse the segment in point of view of consumption, which eliminates the main problems and gives strategic activities for the decision makers.

In the second section of the study it is presented the applied methods and the background of information gathering during the research. In the third section it is discussed among the sectoral SWOT analysis the strength and opportunities, after that considering the weaknesses and threats it is drawn the sectoral problem tree. Following the exploration of the problems, it is completed the objectives-tree with the conversation of the problems to goals. In this structure it is presented the activities to achieve the strategic goals. The last section presents the main conclusions, findings of the research.

MATERIALS AND METHODS

The aim of present study is the strategic point of view analysis in mangalica sector, where the main emphasis is to explore the problems in connection with the consumption. All this is made by during the strategic analysis applied SWOT analysis, problem- and objectives tree analysis. The SWOT-matrix of the mangalica has discussed by many of research articles (Török, 2011; Szakály *et al.*, 2009; Bánáti-Várkonyi, 2009), which are completed with the discussions of main players of the National Association of Mangalica Breeders (NAMB) and the problem- and objectives trees are drawn after that examination. Problem analysis identifies the negative aspects of an existing situation (D'Haese, 1998) and establishes the 'cause and effect' relationships between the identified problems (European Commission, 2004). Each problems are not defined in general rather specifically and based on the cause-effect relationships place them above, below or next to the others. This problem tree represents a summary picture of the existing negative situation which contains the core problem and the causes and also the effects (Nábrádi-Szóllósi, 2008). With a clear problem analysis we can range all of the problems and the causes and highlighted the core problem this tree structure outlines the solutions towards the objectives (Cserpes, 2011). The objective analysis draws up the future situation, what we can reach with the conversion of negative situations into solutions. With this method is completed the objectives tree and the needed activities to

implement of these goals. The objective tree provides a summary picture of the desired future situation, including the indicative means by which ends can be achieved (MDF, 2005).

RESULTS AND DISCUSSIONS

In present study is prepared firstly the complex SWOT analysis on the basis of the latest literatures and interviews, where the sectoral strengths, weaknesses, opportunities and threats are described. In the first subsection of this section is presented the sectoral strengths and the future opportunities. To establish the actual problems and explore the cause-effect relationships between these problems it must be considered in SWOT matrix described disadvantages and threats. The problem tree is made after this procedure.

Sectoral strengths and opportunities

In sectoral aspects the most important strengths are the mangalica pigmeat and the positive characteristics of the products made from mangalica. The species is resistance to diseases and does not care about the keeping technology, that is why it is suitable for keeping in extensive technology. Although due to this kind of method the fattening period is longer and the growth rate is lower, thanks to these factors the production costs are higher, but even because of it has the mangalica meat better quality, is tastier and differs from the modern pig in composition of fatty acids. In other hand this type of keeping technology is typical for the small and mid-sized farmers and also because of the resistance it is able to produce organic/bio products with higher added value. Due to the above mentioned factors it can be produced high quality products, what has increasing demand in the foreign markets. To satisfy these demands it needs always standard products with adequate quality and quantity. This is coordinated by the largest integrator of the segment, by the Olmos and Tóth Ltd. Because of its foreign relationships and market-creating capabilities the mangalica become world famous and more and more markets open for the domestic breeders.

It is very important to satisfy not only the foreign markets but also the Hungarian's. The rural tourism is unexploited in case of mangalica, but the demand is increasing. During the last centuries mangalica was one part of country life and nowadays it is curious in Hungary. Not only the food from mangalica attracts the tourists, but also the appearance of it and the keeping technology. All of these means extra money for the small-scale farmers in the countryside, with it they can remain or maybe develop their low number of sows farm.

Because mangalica is native in Hungary, it is very important to preserve it, the gene conservation and the incentive of breeding and keeping. This task is performed by the National Association of Mangalica Breeders, which is working on the gene preservation of the species, the developing of the livestock and the harmonization of the goods production since 1994. The association not only holds the producers together, but motivates and helps to utilize the supporting policy environment. In 2012 it started again the subventional period to preserve and keep the genetic stock of protected indigenous and endangered agricultural species in breeding. This subvention extends for all the three colour variety (blond, swallow-bellied and red). To submit the application the applicant needs to have at the 1st of January of the current year at least 10 head, 9 month age, purebred sows. The subsidy is available for those of the applicants, who have certificate from the recognized breeding organization (MVH, 2012). Therefore without of the association the breeders can't apply for the national and EU's subsidies.

Not only the international but the national demand is also increasing for the mangalica products, which is partly thanks to the developed community marketing work, the promotion of the products, and the repeated publicity of mangalica. In the past few years there

were organized in more Hungarian cities the Mangalica Festival, and also on other different gastronomical events are more and more mangalica breeders with their products. It can be stated that these kind of programs are more and more popular for the Hungarian consumers. Although the global economic crisis in 2008 had negative effect also for the mangalica sector, the consumers have less money for the more expensive mangalica products. Despite of it with the changes of consumers perception the domestic products made from mangalica will have significant role in the future.

It must be mentioned about the liquid manure management, which is a negative aspect in the pig breeding in Hungary. In environmental aspect it is a permanent problem for the Hungarian animal breeding, because of the high costs it endangers the profitability of the agriculture business. We don't need to calculate with this costs in case of the small and mid-sized farms, because they keep their animals in extensive or semi-intensive technology, mostly on those area, what is not suitable for other agriculture utilization. In this case it is not so large the environmental impact. As in Hungary there are only 4-5 really large mangalica breeders, it is solved this liquid manure problem due to the technology.

The problem tree of the mangalica sector

In the sector advantages it was presented those strenghts which aren't typical in general for the modern pigs. Due to these positive points and opportunities the mangalica sector is particular, unique in Hungary and would be a breaking point for the Hungarian agriculture. But don't forget the negative effects, and also the threats, which we can improve and with it the segment would be more competitive. The prepared problem tree can be seen in the Figure 1.

On the basis of SWOT analysis it is defined the main weaknesses and the external market factors included threats. These are presented in the problem tree structure. According to the analysis it can be stated that one of the core problem is that the origin of the mangalica products are not certified in the Hungarian markets. This basically leads to two problems: one of those is that a lot of producers adulterate the mangalica products, which is the indirect effect of the lack of information and data service what is typical for the total Hungarian agriculture. On the other hand because of the high state charges (taxes, contributions) the black economy is significant. In the mangalica sector is characteristic the unknown animals breeding and fattening. This is good for the illegal slaughtering and also the processed pigmeat sales. The illegal slaughtering is typical, because of the low purchase prices the breeders can sell their fattening pigs on a lower price level, so they try to sell the pigmeat as processed, with higher added value. The adulterated mangalica products are sold on a higher purchase price, although they are not made from real mangalica. It is also happening that from modern pigs are made those products, which are sold in the markets, or it contains only a lower rate of mangalica pigmeat. This kind of consumer deception is not good for the reputation of this segment. It is important to highlight that the mangalica products have special taste. In that case if the mangalica is adulterated and it is sold as mangalica, the consumer confidence is decreasing, which leads to the decline of consumption and other economic and social negative effects.

It is also common that the mangalica breeders don't ask for certificates for their fattening pigs, that would prove the origin of the animals during the sales. Unfortunately this tendency is increasing year by year, but the number of certificates are not the same to the output of fattening pigs. It is not sure that the number of fattening pigs increase largely, but in the past few years it was stagnated. This tendency is partly thanks to the global economic crisis, which causes that breeders went bankrupted. Due to the national and EU's subsidies,

and the improvement of the mangalica image in Hungary and also abroad, it has happened a positive, growing tendency in the livestock and the number of breeders.

Despite of the cooperation by the association and the coordination of the breeding work, the data service is not so satisfactory by the breeders. With this behaviour they endanger the gain of the subsidies so the modernization and also the raise of the livestock. It follows the lower capital for the keeping boars and sows, which causes the lack of breeding animals. In terms of gene preservation it is important to mention those lines in mangalica sector which are in the edge of the extinction. To save these high genetical value lines the NAMB put the boars to the mangalica breeders from the central boar farm or in this farm the NAMB keeps these boars as breeding animals. It is also problem that the farrowing number is not the same to the sow number. The average rate of the sows in inactive status is 15 %, which backgrounds are the animal health and reproduction problems.

In case of the mangalica there are many of factors what is similarly to the Hungarian agriculture also negative for the competitiveness of mangalica sector. These are the causes of the lack of capital, which effects are the obsolete technology and the worse natural indicators (low prolificacy, higher mortality rate, longer fattening period, slow growth rate). Because of these characteristics it can be realize that it does not include into the more competitive pig breeding, although in intensive breeding technologies it is crossed by Duroc boars to get better meat quality and also the natural indicators are better. With this technologies the products will be more standard and safer in the foreign markets.

Unfortunately the lack of cooperation and contractual relationships among the sectoral player are still major problems, that is the effect of the lack of trust between the players. Despite of the many integrations in the segment, the small and mid-sized farms are vulnerable to the purchaser and because of the lack of contractual relationships the breeders are in uncertain positions and it is also the cause of the black economy.

The objectives-tree

After the described problem tree it could be transform the structured problems to objectives, activities, which we can see in the Figure 2. in the sectoral objectives structure. It can be define as the strategic aim, that not only in the foreign, but also in the Hungarian markets should buy certified origin mangalica products. To reach these aims it is defined three specific targets:

- Increase the need for the certificate of fattening pigs by the breeders, motivate the breeders to ask them
- Reduction of the adulterated mangalica products
- Improve the profitability of the segment

In that case if these specific targets will realize with the strengthening of the consumers confidence the Hungarian mangalica livestock and the number of farms will increase, so it is easier to satisfy the growing foreign market demand. To occur all of these it has to perform a lot of activities in the mangalica sector, which are connected with concrete tasks. It must be highlighted that these activities are not enough to perform alone to get the defined targets. Because this sector is also a very complex system, some activities must do in paralell, the others separately in time.

This objective structure is only one part of the problem solving, it needs a total strategic rethinking by the decision makers. With stricter data service discipline, stricter control and sanctions it would be efficient the segment. In other hand it must change the approaches of the mangalica breeders, to realize: the segment would be competitive in the markets of animal products, the pigmeat product, if they produce with proper attention, dedicated and look not only the self-interest.

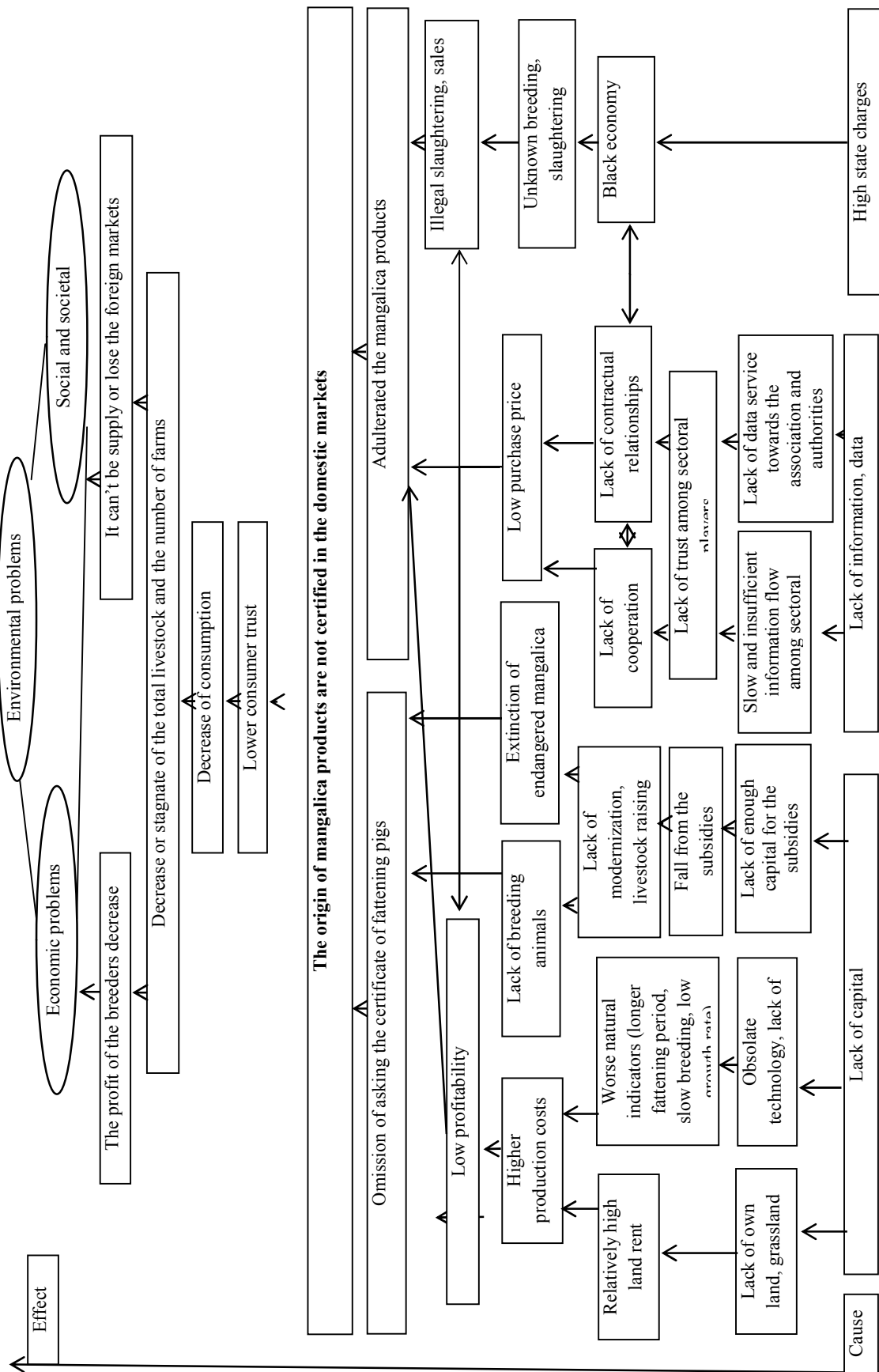


Fig. 1. Sectoral problem tree of mangalica in consumer point of view

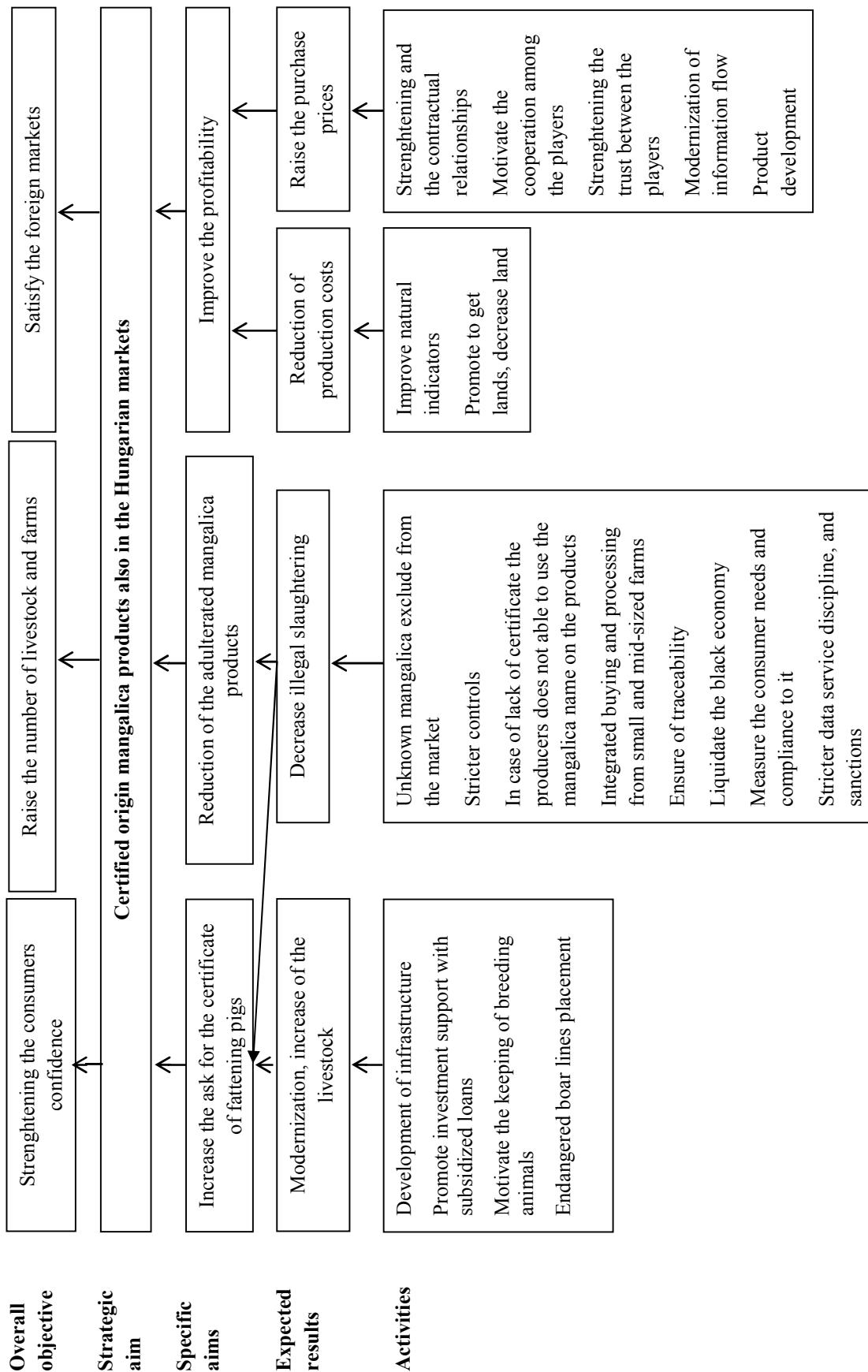


Fig. 2. Sectoral objectives tree of mangalica

CONCLUSION

The aim of present study was the mangalica sector strategic evaluation with the sectoral SWOT analysis on the basis of previous literatures and interviews with the sectoral players. After it was founded the sectoral strengths, weaknesses, opportunities and threats and it was defined the problems and then the main objectives. In consideration of the analysis it can be stated, that the mangalica sector has problems which are also characteristic for the Hungarian pig breeding sector, but has problems which are unique for only the mangalica. Considering the factors of SWOT-matrix was completed the problem tree with the explored main problems. The problem tree was approached by consumption aspect. It was founded, that the core problem of the segment is, that it is not certified the origin of mangalica products in the Hungarian markets. It was explored the main causes, but it can be stated that the direct problems are the omission of asking the certificate of fattening pigs and the adulterate of mangalica products. To solve these problems was prepared the objectives structure, what the problems converted into objectives. The main aim is to solve the problems along those activities which are in the objectives-tree. Obviously an analysis like this not enough to solve the problems, but it would be a good basic for the decision makers in the mangalica sector to improve their competitiveness and produce efficiently.

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