An assessment of the unique products grown in the south of the Great Plain in Hungary

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ABSTRACT

Agriculture has been and probably will be a significant branch in the south part of the Great Plain in the future as well. Besides the mass products, and in many cases instead of them when forming the agricultural structure, this region has to pay more attention to the branches that were important in the past. Hungarian experts who are famous in foreign countries as well deal with these branches and they provide excellent products. The rules referring to these products are more liberal in the market places of the European Union and their development is not controlled by strict quota systems. In the south part of the Great Hungarian Plain a lot of unique products of excellent quality are produced. Here in this essay we would like to find the answer to the question how the two significant products of the southern part of the Great Hungarian Plain can provide the families with an income that they can live on. We aim at the economical examination of the asparagus grown in Homok and of the cucumber grown in Méhkerék. To do this we will apply the so called Standard Gross Margin. The agriculture of the states of the European Union is measured with the help of this method. It can also help us in the future to decide whether the different farms belonging to families are economically viable in Hungary.

(Keywords: hungaricum, economic evaluation, SWOT analysis)

ÖSSZEFOGLALÁS

A Dél-Alföldi Régióban hungarikumként termesztett kertészeti kultúrák ökonómiai értékelése

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A Dél-Alföldi Régióban a mezőgazdaság mindig is jelentős ágazat volt, s ez előreláthatólag így marad a jövőben is. A tömegtermékek előállítása mellett és gyakran helyett a régiónak nagyobb hangsúlyt kell fektetnie a mezőgazdasági struktúra kialakításakor azokra az ágazatokra, melyek nagy múltra tekintenek vissza, magyar művelői nemzetközileg is elismert szakértelemmel rendelkeznek és kitűnő minőségű termékeket produkálnak. Az ilyen termékek szabályozása az Európai Unió piacain is liberálisabb, fejlesztésüket kevésbé köti a merev kvótarendszer. A Dél-Alföldi Régióban számos sajátos, kitűnő minőségű, speciális terméket állítanak elő. Munkánkban arra keressük a választ, hogy a Dél-Alföldi Régió két jelentős kertészeti kultúrája hogyan biztosítja a család megélhetéséhez szükséges jövedelmet. Ennek érdekében célul tűztük ki a Homoki spárga és a Méhkeréki uborka termesztésének ökonómiai vizsgálatát a Standard Fedezeti Hozzájárulás módszer

segítségével. Az Európai Unióban a tagállamok mezőgazdasági termelés hatékonysága mérésének ez az egyik módszere amely Magyarországon is a jövőben segítséget nyújthat a családi gazdaságok életképességének eldöntéséhez.
(Kulcsszavak: hungarikum, ökonómiai értékelés, SWOT analízis)

INTRODUCTION

The Hungarian food industry and agriculture is one of the most important areas of the national economy. Most agricultural products get to the consumers after food industry processing. The market possibilities of a nation and the competitiveness of the agriculture products are defined by the standard and the state of development of the food industry (*Hajduné et al.*, 2001). From among the changes of the economy of a nation the series of changes of the agriculture are the most particular. Privatisation reorganised the property structure of the food industry to a great extent. In the following years a group of companies run by families and being competitive in Western Europe will probably separate from the others involved in agriculture and they will represent the majority of the Hungarian agricultural production (*Hajduné et al.*, 1998). Because of its geographical situation Hungary is extremely suitable for producing a lot of products of high quality. The fame of these cultivated areas is important for our export-oriented national economy (*Totth*, 1995). The image of the cultivated area is diverse and besides the particular products the characteristic features of the area, the atmosphere of the place, the characteristic features of the people living there, the past and the history of the area also play a significant role. In the case of the unique Hungarian products processed here the consumers have to be familiar with the quality and have to recognise it (*Ferencz,* 2002).

MATERIALS AND METHODS

The Standard Gross Margin (SGM)
Our calculations were carried out with the help of a method worked out and applied in the European Union. In the European Union the agricultural enterprises have been regularly assessed (since 1966) and comparative data have been given to the decision-making organisations of the Union. Because of the number and the variations of the enterprises more than one form of measuring was applied such as the territory of the factory, the number of the employees, the number of the animals bred and the price of the products sold. As it was experienced the achievement of the agriculture in a state could not have been defined by these forms of measuring and by the combination of them. Similar to this they were not sufficient to determine the economic size of an enterprise and to compare the different factories from economic aspects (*Kovács*, 2001).

The unified classification system (the economy typology) was accepted in 1978 and pays attention to two aspects, the type of farming (the structure of production) and the size of the economy. In order to define the economic size the Standard Gross Margin (SGM) was worked out (*Kovács et al.*,1999). The natural data referring to the structure of the factory cannot say anything about the achievement of the agriculture of a country and they are not good for economic comparing. The size of the factory is defined the best of all by the potential profitable capacity which equals with the total standard gross margin (SGM) of the particular factory -which is the same as the added value (Agriculture in the European Union 2001, European Commission).

The calculation of the Standard Gross Margin

According to the regulations of the European Union, in cultivation of plants the costs of the seeds, the propagation, the artificial fertilizers, the insecticides, the heating, the irrigation, the processing, the classification, the packing, the insurance and other variable costs that are connected with the particular production activity have to be taken into consideration among the direct variable expenses. The indirect variable costs are also defined. The variable expenses in connection with the machines belonging to the factory (such as fuel, lubricants, repairing costs) are listed here. These two groups together mean the variable costs of the economy. It does not include the costs of amortization and the rent of the agricultural land. This method takes into consideration all wages and their complementary costs as constant expenses without paying attention to whether they were paid to the owner of the farm or to a family member or to an employee. The amortization costs of the tangible assets, the rent of the agricultural land and the general costs are referred to as constant expenses (*Ferenczy,* 2002).

The SGM1 and SGM2 index numbers can be calculated on the basis of the relations mentioned below.

– SGM1=sales – direct variable cost (direct material costs)
– SGM2=sales – direct variable cost – indirect variable cost (the direct material costs and the direct costs of machine work are deducted from the sales). The SGM2 index number is in fact the gross income (*Nagyné et al.,* 2002).

The necessity of live labour

The basis of the economy producing unique Hungarian products is to deal with growing plants that assure the costs of living for a long time, can be easily produced in the south of the Great Hungarian Plain, can be easily sold in the market and can be produced by *own live labour* (*Ferencz,* 2000).

The necessity of live labour has to be determined especially in the harvesting and the selling period. It can be calculated on the basis of detailed producing technology. In this essay we determine the area that a family can cultivate on its own – without employing workers seasonally. If we take a family with four members we calculate with three manpower units. In our earlier research the working days and working hours in cultivation of plants were defined. These data are essential to calculate the necessity of live labour especially when we plan the working peak. In the harvest phase we calculate with 7-10 working hours per manpower units a day. The family can perform 200-250 hours every ten days (*Ferencz,* 2003).

RESULT*S* AND DISCUSSION

The assessment of the cucumber grown in Méhkerék

The economic assessment of the cucumber grown in Méhkerék

The training system for growing cucumber assures bigger quantities and better quality compared to the plough-land cultivation. The cost of it is 0.9-1.1 million Ft per hectare which does not include the farmer's labour. This system can be planned for ten years and can be applied when growing tomatoes as well. A particularity of growing cucumbers intensively is that the size of the desired product is in inverse relation to its yield and average price. The yield is lower if we pick cucumbers every day which are

1cm-3cm, 2cm-5cm and 3cm-6cm big and their price is higher. In the model we plan to pick 3cm-6cm and 6cm-9cm big cucumbers every two days.

From among the direct variable expenses the costs of artificial and organic fertilizers, pesticides, plants, irrigation and other variable costs were calculated in our project. The direct variable cost of the cucumbers grown on family farms with the help of training systems and irrigation is 150,000 forints per hectare. In our technology 200,000 forints per hectare varible cost was calculated taking into consideration the running and the repairing costs of the machines of own property. The total variable cost in a year (350,000 forints) was compared to the probable income. The yield can reach 80 tons per hectare in the south of the Great Hungarian Plain if irrigation is applied. The 60-forint average price could assure the farm a 4,800,000-forint income. We must not forget about the fact that such an intensive planting culture requires 200,000-forint cost per hectare at the beginning taking only an average data. This cost cannot be taken into consideration among the expenses (according to the terminology of the European Nations). Similarly to this the salary cannot be deducted although the application of live labour is the highest in case of growing plants in the fields.

– SGM1 = 4,800,000 Ft income – 150,000Ft direct variable cost = 4,650,000 Ft/year/hectare
– SGM2 = 4,800,000 Ft income – 150,000Ft direct variable cost – 200,000 Ft indirect variable cost = 4,450,000 Ft/year/hectare.

The need for live labour is the greatest when planting starts. If own labour is used, the work can be finished in time. The next peak of work appears during harvest when 540 working hours of live labour per hectares are needed. Taking into consideration the number of the working hours, one family can manage 0.51-hectare-post system area without employing working seasonally. The area that can be cultivated by the family on average assures only 2,269,000 Ft SGM.

The SWOT analysis of the cucumber grown in Méhkerék
The *strong point* of the product is that it can be easily stored in a cool place if not damaged. The pickled cucumber made from it is a popular product. The *weak point* of the product is that there is no characteristic feature marked. The consumer does not know where the product is from and why it is better than other cucumbers. The Greek cucumber is a competing product in the western and northern market places. The market place can be made wider with specific target groups. This product is not a main but a complementary product therefore the target group has to be defined taking into consideration the fact when the product is consumed.

Possibilities
The product should be made more famous with the regular use of an emblem marking the origin. Competition and substitution products can involve a *risk.* In 2000 the share of the Greek cucumber was 80%. In case of a cosmetic product (facial tonic, skin-friendly cucumber) the alternative application possibilities must be marked.

The assessment of the asparagus grown in Sand
The economic assessment of the asparagus grown in Sand
The basis of the production is the asparagus plantation, which has a good effect on the farming. After planting there are three or four years without harvest but the field must be

cultivated even though there is no income and no other plants can be grown meanwhile to utilize the area. The cost of plantation and cultivation is 2,000,000 Ft in the proportion of 85+5+5+5 every year. Besides this, 1600 working hours are needed. The factor cost of one hectare is 2.6-3 million Ft. The length of the period when there is harvest is 6-8 years. The accountable depreciation is 15% a year. During this period the quantity of the yield is not the same: in the first two or three years it is growing, then it is stagnating for two or three years, and after that it is decreasing. In this model we calculate with the yield of a stagnating year.

The variable cost of the enterprise is encumbered with almost 54,000 Ft per hectare. This includes the costs of the materials, the artificial and organic fertilizers, the pesticides, the packing and the processing. The indirect variable cost of the farm – according to our survey - is 42,000 Ft which gives a result of a total 96,000Ft variable cost. In the south of the Great Hungarian Plain – taking into consideration the areas not abounding in nutrients – we can calculate with a five- tonne average yield per hectare. The distribution must be calculated with care with a 400 Ft-average price. The income is 2,000,000 Ft per hectare. The biggest peak of work appears during the harvest. Taking into consideration the number of working hours 0.97 hectare of asparagus plantation ripening at the same time can be accomplished without employing workers for this season.

– SGM1 = 2,000,000 Ft income – 54,000 Ft direct variable cost = 1,946,000 Ft/year/hectare
– SGM2 = 2,000,000 Ft income – 54,000 Ft direct variable cost – 42,000 Ft indirect variable cost = 1,904,000 Ft/hectare/year. The SGM2 for a 0.97 hectare is 1,846,880.

The SWOT analysis of the asparagus grown in Sand
Analysing the *market position* of the product we can state that the production of the asparagus in the sandy soil is increasing. 98% of the product is exported. After having a look at the SWOT analysis of the asparagus grown in Homok we can say that the *strong points* of the product are the following: it can grow in excellent quality, the ones that ripen early assure high profit, it has got a steady market, low-calorie meals can be made of it, it has got a high mineral and fibre content, it can be bought in bigger supermarkets throughout the year, and products for enjoyment can be made of it what makes the product more valuable. The *weak point* of the product is that it withers easily after harvesting therefore it should get to the market and to the consumer in a short time. In the countries in Western Europe it is a popular delicacy, but it is not well known in Hungary. It cannot be harvested with machines and requires a lot of live labour. The competing products can mean a *problem.* According to the articles written by experts the new asparagus generation in France will be brought to market only in 3-4 years' time so there will probably be a gap in the countries of the French asparagus. At the same time in Germany the cultivated area where asparagus is grown was increased by 3% in the last years. If we use the *possibilities* we can get a high profit. It can be sold in bigger quantities in the market-places in Hungary and a very good marketing strategy is not necessary. Its value can be higher in processed forms (tinned asparagus, instant soup). The possibilities in the market places in Hungary are completely neglected. The new consumer target groups are vegetarians and people who like reformed diets and specialities. On the packing the positive content differences, the origin and the information referring to application have to be marked.

CONCLUSIONS

The bread winning capacity of the cucumber grown in Méhkerék

In order to get the income expected the cucumber should be grown with the help of a post system on a 0.72 hectare big area. On such a big area other workers have to be employed during the harvest period for 540 working hours. The cost of this is 195,000 forints.

This kind of cucumber growing makes it possible for the family to make ends meet. On the basis of the significant export, the market for the cucumber can be said to be steady. The income depends on the Hungarian sale ring and the processing. The cost of introducing the post system is high but the income of the first year can cover this cost on a successful farm.

The bread winning capacity of the asparagus grown in Homok

In order to get the income expected the pale asparagus should be grown on a 1.66 big area. On such a big area other workers have to be employed during the harvest period for 469 working hours. The cost of it is 170,000 Ft. The kinds of the asparagus make it possible for the family to make ends meet. On the basis of the significant export, the market for the asparagus can be said to be steady. The income depends on the Hungarian sale ring. Because of the frost in late spring it is not recommended to base the whole income of the farm on the asparagus. Other recommended products can be the ones of which the harvesting time is not the beginning of April or the middle of June.

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