The Possibilities of the Sustainable Agriculture in Romania Showed by the Example of a Small Settlement

Abstract: It is among the main tasks of the sustainable agriculture to find and advance the methods and technologies under the economic and social circumstances, which are able to harmonize the economic and environmental aspects of agricultural production. In the industrial agriculture it is general to use artificial chemicals both in production and processing, which causes accumulation in the human organization and serious diseases. At the same time the role of the agriculture changed in the last decades in the developed countries. Beside the production function it is more and more significant to fulfil the requirements of multifunctionality, it goes hand in hand with chemical reduction. One alternative of the above mentioned can be the ecological farming, since in the last years the demand on healthy food increased, and the consumers are willing to pay 30-70% more. The European Union supports the use of environment friendly strategies. The accession to the European Union is a great challenge and historical chance for Romania. On a 450 million people market it has to face high quality requirements and intensive competition, but at the same time it can take the advantage of the EU and become one of the most successful agricultures in Europe. The unique natural-social facilities of Romania and the good transport possibilities owing to the nearness of the sea are giving the bases.

Most of rural people are in connection with agriculture and the development of agriculture can result the improvement of their quality of life. The development of the Romanian countryside and the life of the rural people are important for the European Union, because otherwise the integration can slow down and the social problems would escalate. In the development conception the characteristics of natural, social and market environment should be taken into consideration.

The socio-economic changes in 1990 had great affection on the agriculture. The farm structure became fragmented, significant labour force came in the agriculture from other sectors, and many rural people complete their low income with household production. The decrease of industrial agriculture reduced the use of chemicals, which is tenth of the EU average.

The study analyses how the organic farming can be a solution under given circumstances. We give a short review of the current situation and of the trends of the Romanian agriculture, and ecological agriculture of the world, Europe and Romania.
After the analysis of the agriculture of Mezőmádarász, a small settlement in the Maros region, we look for the development alternatives. The situation of Mezőmádarász is usual in Romania, so numerous conclusions for the whole country can be taken.

**Keywords:** sustainability, organic farming, rural development, Romanian agriculture

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**Introduction**

The EU membership doesn’t lead to success automatically, it gives chances, but it is the task of the member countries and citizens to take the advantage of them.

The accession to the EU is a great challenge and task for Romania as well. Beside the advantages of the subsidies and of the grown market, the integration made also an intensive competition, since the Romanian economy should face changed requirements and significant competition on the 450 million people market.

The agriculture has a significant contribution to the Romanian economy, it gives 8% of the GDP, and 35% of the employment.

47% of the population lives in rural areas, most of them work in the agriculture. To improve the quality of life of the rural communities it is required to develop the agriculture, to change the structure, to use natural and human resources.

It is more and more important to supply the society with healthy foods. It is enough to think on the food scandals of the last time. The consumers are willing to pay 30–70% more for the high quality products. The European Union supports the production of high value added and environment friendly products.

It is task of the European agriculture beyond the production to preserve the culture of the rural communities and the environment.

The experiences show, that organic farming can be a solution for the above sketched problem. The demand on labour force is high; it can realize high income in smaller farms. The aim of the study is to analyze how the organic farming under the current circumstances can contribute to the development of an agriculture which is marketable, fits to the European trends and ensures a reasonable life standard for the rural population.

The Romanian agriculture had more important role before the accession, and today it is more significant in the national economy as in the former accessed Central European countries. Romania has special natural and climate conditions. The agricultural area reaches 62.2% of the total area, the two third of it is cultivated. 47% of the population lives in rural areas, most of them are in connection with agriculture. The share of the agriculture in the total GDP is significant, but shows a shrinking tendency, according to the usual trend of the economic development (agricultural GDP oscillated from 18% to 21% in the period of
1990–1996, 2002 decreased to 13%, 2006 to 8%). The agricultural employment has an increasing trend, in 1990 29%, in 2002 36% of the employees worked in the agricultural sector. The reason is the increased unemployment caused by the disintegration of the industry. Lacking other possibilities for income, most of the rural population produce agricultural products, mostly for self consumption.

The production potential is not utilized properly which the reason is the simultaneous lack of capital, arable land and technology. As a consequence of the socio-economic changes in 1990, the agriculture went through a remarkable transformation. The place of the state farms, which were cultivated on large areas, was taken over by small family farms, which constitute 98% of the farms. Most of the old-new holders came from other sectors into the agriculture. The low profitability and technical standard are typical.

At the same time it should be mentioned that the agriculture decrease some social problems, since many people complete their low income with the production. The willingness for cooperation is low because of the dictatorial cooperative organise of the last decades.

According to the data of the agricultural census from Romania, in the year 2003, there were about 4 759 229 farms, with an average area of 2.9 ha. [Manoleli et al. 2004.]

The Romanian agriculture was characterized by 4 organizational forms:

- Individual farms (4.2 million of about 2.5 ha in the average), which cultivate on the 70% of the agricultural land, representing the main component of the private agriculture in Romania
- Private farms as legal entities that include the so called associations established after 1991 through different mechanism, operating 10% of the land, their total number is about 4 500 with an average size of 40 ha
- Family farms (non legal entities). There are about 6 500 of them with an average farm size of 120 ha. They operate about 5% of the agricultural area
- State farms, resulting from the former state enterprises (operating on the 15% of the agricultural land) [Manoleli et al. 2004].

It is worth to compare the former data with the survey of the EUROSTAT, according to that 126 000 farms are larger than 1 ESU in Romania.

In the first group there are farms with a size of 0–5 ha, they compose 74% of the agricultural holdings. They produce mainly for self consumption; low technical standard and capital efficiency are typical for them.

23% of the holdings compose the second group, with a size of 5–20 ha. The production to the market has more significant role, but the technical standard is also not developed. Only the 1.2% of the farms cultivate lands of 20–50 ha, and 1.1% are larger than 50 ha. They produce mostly cereals or breed animals.

In comparison the average size of the farms in the EU-25 is 16 ha, in Germany 44 ha, in France 48.6 ha.
The agricultural foreign trade experienced radical changes in the 1990s. The positive trade balance became negative. The maximum value of the trade deficit was reached in 1990 (1083 million USD), and gradually decreased to 130 million USD between 1996 and 1997. From 1998 the trade deficit began to increase, in 2002 it reached more than 700 million USD. The export of agricultural products accounted 6–8% of the total export in the period of 1991–1999, and it decreased to 3.1–3.8% in the period of 2001–2002. The import of agricultural products amounted 9–16% in the total import between 1990 and 1994, and oscillated from 6% to 8% in the next period.

The main trade partners are the EU and the CEFTA countries (with 60% of the import and export). The exported goods are raw materials or low processed goods such as live animals (sheep, goats, horses, donkeys), wheat, barley, maize, fresh and frozen fruits and vegetables, wine, and grape juice. The imported goods are first of all processed food products, alcoholic drinks, tobacco, what shows the low competitiveness of the Romanian food industry. [Manoleli et al. 2004.]

Material and methods

Different studies, statistical issues and databases made the basis of the analysis of the Romanian agriculture and sustainability, of the Romanian and European situation of organic farming (FAO, EUROSTAT, Romanian Ministry of Agriculture, IFOAM (International Federation of Organic Agricultural Movements). The case study which shows the possibilities of a small settlement was made in the Romanian Maros region, in Mezőmádaras. [Takács – Takácsné György 2003; Takács – Takács-György 2003]. The population of the village is about 1300, out of which 1000 people are of Hungarian nationality. The village is 15 km far from Marosvásárhely. Most of the inhabitants are connection with the
agriculture. The mobility of the people is low, the self consumption is typical, however the main income source comes from the product surplus. Therefore the development of the agriculture has a significant role in the socio-economic development of the village due to the speciality of the region and the village.

The survey showed in this study was a questionnaire. The questionnaire including open and closed questions put the following question groups: scale of the farm, sector construction, quality of the lands, yields, the use of products, quality sensitivity of the producers, marketing channels, the technical standard of the farms, willingness for cooperation of the producers, consumption of milk products and demand on new products. We analyse the economic inputs and the non-agricultural incomes. The questionnaire was completed in 120 families. 443 people were interviewed, who compose 34.5% of the population, and 66.5% are employed in agriculture. The data were analysed with multiple statistical methods.

**Sustainability**

The recognition escalated more and more in the 1980s that environmental problems can not be solved separated, they should be managed together with the economic sectors. The environmental and economic policy should be integrated.

Sustainability means that we can meet human needs in the present and we can preserve the environment and natural resources for the following generations at the same time [Lááng 2003].

In the last decades there has been evolving consensus in that the sustainability has three basic pillars:
- Sustainable operation of economy;
- Acceptable and flexible social conditions; and
- Protection of environment and natural resources.

The aim is reasonable life for everyone. The resort is the economy and the preconditions are the environment and natural resources.

The sustainable development has many definitions. “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. [Bruntland Committee: Our Common Future 1987]

Another from Herman Daly: “Sustainable development is reaching the continuous social welfare without increasing as exceeding the ecological capacity. Growth means to be bigger, development means to be better” [Láäng 2007]. In several economic sectors, mainly in agriculture, the sustainable development was defined in detail. A definition from the Canadian Ministry of Agriculture is as follows: „Those agricultural and food industrial systems are called sustainable that are economical, fulfil the demands of the society for healthy foods, preserve the environment and natural resources for the next generation.” [Láäng 2007].
The common point of the definitions is that each supports the energy and material economy, the use of local resources, prefers the renewable resources and the minimization of waste, the prevention and reduction of pollution, the quality instead of quantity and the protection of natural values.

Sustainability is not against of growth usually in the economic life. The developing world would never accept a conception which forbids the growth. The growth at all costs can make undesirable effects. Talking about sustainability the human parts come to the front increasingly. Beyond the lifestyle, life standard, consciousness, preserving of values and tradition, the requirement of the development are the employment, health protection, human rights and democratic institution system.

**Organic farming in the world**

Organic farming started in the 1920s when the agricultural productivity and quality of the food declined. To solve this problem the German Rudolf Steiner developed the biodinamic farming method. Later on several trends were developed: Fukuoka-theory, organic biologic, soil association, permaculture. [Járási 2006]

31 million hectares were cultivated in ecological way in the world in 2006. The share of Australia was 12.126 million ha. China has the second largest area with 3.5 million ha, followed by Argentina (2.8 million ha), Italy (954 000 ha), USA 890 000 ha [Willer-Yussefi 2007].

Surveying the situation of organic farming worldwide it can be noticed that in Africa it is not significant since the fundamental food supply is problem on the continent. The added value is little, the products are less processed. 119 000 farmers cultivate 1.2 million ha. It is a small part of the total agricultural area. The products – above all fresh fruit and vegetables – are exported to Europe.

The ecological area is 4 million hectare in Asia, which is cultivated by 129 000 farmers. The most significant countries are China, India, Indonesia, and Bangladesh. Most of the products are sold to Europe and Japan. The most important country in the region is China, the Chinese government increased the ecological land by 100% in the last two years with state subsidies. The Chinese products have influence on the European prices.

Australia has the largest ecological area, more than 12 million ha, cultivated by 1 730 farmers. The average size of the holdings is 6 000 ha. Most of the land is used for extensive animal breeding. The size of organic land is 6.3 million ha, most of them is used for extensive animal breeding. The most important products are fruit, vegetables, coffee, cacao, sugar, meat (sheep, cattle).

In North America less than 1.5 million hectares are cultivated in ecological way. In the USA, the demand on organic products developed very quickly in the last
years. The production increased by 20% in a year. Most of the producers concentrate on the internal demand, the export is only 1%.

The controlled area is 6.5 million ha in Europe.

The market of the organic products was 25.5 billion euro in the world in 2005, in 2006 it was more than 30 billion euro [Willer-Yussefi 2007].

**Organic agriculture in the EU**

The organic land is 4% of the total arable land area in the EU 25, with slight increase. Austria has the largest share (11%), followed by Italy (9%). In Hungary 4% of the arable land is cultivated organically. [EUROSTAT 2007] 18% of the organic crops is produced in Italy, Germany and Spain follows it with 14 %. Among the new members (EU-10) the Czech Republic has the highest percentage with 4%.

The growth rate was the most significant in Malta and Latvia between 2004 and 2005. Ireland, Greece, Spain, Cyprus, Italy, Lithuania and Slovakia have recorded positive growth rate with more than 10%. Belgium, the Czech Republic, Denmark, Hungary, Finland and the UK are experiencing downswings in organic area.

![Chart 4. Share of total organic area by country (%) out of total EU-25 organic area, 2005. Source: EUROSTAT data](image-url)
The share of organic farms increased similar to the European tendency (EU-25). The greatest share is also in Austria. In Denmark, Finland and Spain this share decreased. It is less than 2% in Latvia and Slovenia, and less than 0.3% in Slovakia, Hungary, and Poland. The average farm size is larger in the organic agriculture than in the traditional, except for Denmark, Austria and Luxemburg. This difference is the most significant in the Czech Republic and Slovakia, but can also be seen in Hungary, Poland and Portugal.

The Organic Farming Regulation No. 2092/91 demands a minimal farm size per type of animal.

Most of the organic operators are producers. The number of producers exceeds far the number of processors and traders in the new member countries, while in other states, in Belgium and Holland the share of processors is 42%, in Germany, France, UK and Luxemburg it is 30%. The importance of the processors and traders is shown by the higher added value, and better marketing in the latest countries.

Organic product can be produced only on converted area. Before being considered converted all areas need to have a period where they are under the conversion process. This period is established in the Organic Farming Regulation No. 2091/92. The area under conversion over the total organic area gives the potential growth. Potential growth is different in the countries. Cyprus, Latvia, Lithuania, Malta and Slovakia have big potential with 70–100%. Hungary, Ireland, Greece, Italy and Slovenia are in the middle with a potential of 30%. In more than one third of the member states the share of organic land under conversion is less than 15%, and their potential for growing production is very limited. Denmark is an extreme example with 1.4%.

Crops can be classified in three significant types: annual crops, permanent crops and pastures and meadows. Only Greece, Italy, France, Portugal, Cyprus have dedicated significant areas to produce organic permanent crops. These crops are fruit trees, olive groves and vineyards.

The most important annual crops are cereals and green fodder. In Hungary the share of industrial crops is 20%. In some countries the most representative category are the pastures and meadows, in the Czech Republic the share reaches more than 90%. On the other hand in Cyprus and Finland this category is not significant.

In some countries the production of organic livestock is considerable, principally in the sheep, cattle and pig sector. The most popular is sheep breeding. In Austria 24% of the sheep, 17% of the cattle breeding uses organic production methods. In the Czech Republic, Denmark, Sweden and Latvia 5% of the cattle is bred in organic way. Greece is the only country with a high percentage of organic pigs: 13% of the total production of pigs.
The development in individual member states differs according to species. While the number of heads of cattle and pigs decreased in Belgium from 2004 to 2005 by 6 and 3%, the number of sheep increased by 50% at the same time. In the Czech Republic the number of pigs has more than doubled, but cattle and sheep lost considerable proportions of their populations, 32% and 23% [Llorens-Rohner Thielen 2007].

**Organic agriculture in Romania**

Organic farming can be a breakout point for the agriculture of Romania. The facilities are especially good for organic agriculture: the use of chemicals is 8-10 times lower than the EU average, the traditional farming methods are widespread, which makes good basis for the modern organic production.

The organic agriculture of Romania can be characterized by small farm size. This meets intensive competition in the EU. On the other hand in Romania some large organic farms and integrations such as ASI Nature (1500 ha, 5000 sheep), Dorna (3000 small producers), or Cortina SRL (2500 poultry) can be found as well [Heilmayr 2006].

In Romania 12 certification agencies are working, controlled by the Organic Farming Department of Ministry of Agriculture. They follow the way of products from farms to the consumers. The intensive competition resulted very low inspection and certification prices. The products of the certified farms are marked with the national organic label approved by the Ministry of Agriculture.

Before certification, farms have to undergo a conversion period during which organic principles are implemented to reduce non-approved inputs in the fields. Due to minimizing the chemicals on Romanian farmland over the last 15 years, reduced transition periods are offered to the potential producers. While farmers of the EU-country can face a transition period of five or six years, a typical conversion period in Romania lasts one or two years. As a result the potential growth is significant.

The size of organic crop land increased spectacular in the last years. In 2000 17 348 ha, in 2004 75 500 ha were cultivated in organic way. In 2006 3 676 farms cultivated 170 000 ha, which is 1% of the total agricultural land. In 2007 it will increase to 200 000 ha.

The most important products are wheat, maize, millet, rye, which are grown on more than the half of organic land area. Organic hay and animal feed crops are grown on 50 000 ha and industrial crops take up 22 000 ha.

Organic animal husbandry has developed rapidly over the last six years. Organic apiculture produced more than 600 tons of bee products in 2006 which means an 88% growth from 2005. Between 2000 and 2006 the numbers of sheep, cows and hens raised organically have grown respectively from 1 700, 2 100 and 0 to 76 100, 9 900, and 7 500.
The most significant problem of the Romanian organic agriculture (similar to the other Central-East European countries) that the added value is low, the products are exported less processed.

The changes in the dairy show that companies can be successful in organic products. Dornlacate, the largest dairy processor in Romania is currently collecting organic raw milk from 1800 small farms. Another processor, Camilact has opened his activity in the organic sector and has contracts with 600 farms. The rise in production of the organic versions of three popular sort of cheese (ementhal, cascaval and telemea) emphasizes this growth. In 2000 producers produced only 41 tons of organic ementhal, cascaval and telemea, in 2005 production jumped up to 1078 tons.

Although organic production has rapidly increased, Romanian habitants have shown little interest in purchasing the products themselves. Organic consumption makes up significantly less than one percent of all food purchases. The reasons are the low average income, minimal awareness of organic agriculture, and the difficult availability of products. 95% of the organic products is exported. The products are exported usually in bulk to EU markets for further processing. The export to the USA is difficult because the certification (US Department of Agriculture’s National Organic Program (NOP)) is prohibitively expensive and the three year compliance period is another obstacle. Since in the EU countries the certification can be acquired in a year and it is much cheaper, most of the companies choose the EU.

**The possibilities of organic agriculture in Mezőmadaras**

In the survey the possibilities of organic agriculture was examined by analysing the present conditions of agriculture in Mezőmadaras. From the comprehensive questions in the article we emphasize the question in connection with the production construction of the farms, technical standard, use of products, and the willingness for cooperation of farmers to support the conclusions.

**Size of holdings, possibilities, structure and level of arable farming**

The total agricultural land of the surveyed 120 farms is 542 ha, therefore the total land of the village is about 1500–1600 ha. 9.2% of the farms uses leased area, from which 39.6% is taken by the habitants. Most of the farmers pay in kind for the leasing. The typical amount of crop is 400–600 kg/ha. In some cases the agreement takes half or one third of the crops.

The average size of the farms is 4.5 ha; in case of the lesers it is 11 ha. The smallest is 0.12 ha, the largest make up 74.8 ha. The deviation is 7.665 ha, which shows that many farms have average size (Chart 3.).

Considering the model calculus of Takács György K. [1994], according to the production structure and production level, the minimal break even point is 20–80 ha on the typical level 40–60 kW prime movers in the village. Among the
Romanian price and cost conditions it can be 30–50% lower than this range, but as 95% of the farms do not reach the minimal size, it is more unfavourable than in Hungary, since according to Molnár and Szűcs [1998], the less than 10 ha farms take up more than 50% of the holdings, and 80% of the agricultural land.

77% of the total land is field, 18.9% are pastures and meadows, only 2% are garden and 1.1% is forest. The quality of the fields are middle, the pastures have lower quality.

Among the arable crops cereals have a significant role, on 49.9% of the land crops are produced, maize on 46%, and potatoes on 13.8%. Among crops wheat (18.5%), oat (13.8%) and barley (10.3 %) are popular. The most often produced are maize (96.7% of the farms), wheat (81.7%), and potatoes (42.5%). The self consumption is typical, in case of the cereals it is over 90%. In the self consumption, the animal feed has a significant share, what shows the role of animal husbandry.

The average yields are typically low, (wheat 3.7 t/ha, maize 4.96 t/ha, oat 1.24 t/ha, potato 13.38 t/ha). Only 12.6% of the income comes from selling the products. The low yields of the arable crops could led to the low level of the inputs. 53% of the farmers use chemical fertilizers. Most of them (75%) bought complex fertilizers; in lower share also nitrogen fertilizers and 25% used only nitrogen fertilizers. The quantity of the active substance is low (70kg/ha).

In 63.3% of the farms organic fertilizers are used, 99% of them use self made fertilizers. The quantity is different, but most of the farms use less than 100 q/ha (10 t/ha). More self produced seeds are used than the optimal (wheat 54%, maize 64%), so the biologic basis are not efficient.

42.5% of the farmers used pesticides, typically for the protection of wheat and maize, and in lower share as herbicide.
Structure and level of animal husbandry

Animal husbandry is based on self produced feed, and the grazing is typical (sheep, cattle). In every farm poultry can be found, but it is often for self consumption (98.3%). The average number is 38 poultry/farm. The eggs are sold in low share (14.2%), the quantity is 6.7% of the total production.

The role of cattle breeding is prominent in terms of commodity production. 83.3% of the surveyed farms breed cows, and the average number is 1.8 cow/farm. 86.5% of the milk is sold, most of them for the cheese processor in the neighbour village. The quality of the milk is not prominent. The average fat content is 3.5%. The number of germ and for technical reason the mechanic pollution is also high. 47.5% of the income of animal husbandry comes from milk sale. From the sale of progeny and fattening comes 49.7% of the revenue, the share of pig are 27.5%, the share of cattle are 22.2%. The milk yield is low. The average milk yield is 3175 l/year, the lowest is 1150 l, the highest is 8800 l, and standard deviation is 1100 l. The most meaningful trade were made at the pigs among live stock. 39% of the farms bought pigs, the average number were 3.7, which varied between 1 and 10, the average weight were between 15 and 20 kg.

14% of the farmers bought calf for fattening, the average number were 4.8, with a weight between 90 and 120 kg.

The farms used self produced feed usually, only 2.5% of the farmers bought – and only special – feed, and in low quantity. But a high proportion of farmers bought animal medicine (38%) for poultry, cattle and pig.

Technical standard

The technical standard of the farms in Mezőmadaras is low. One in tenth farms has minimum one tractor, the average is 1.46, other 32% of the farms have horse, in the rest 57.5% there are cattle. The instruments are based on essential instruments such as plough, harrow, sowing machine, couch, trailer and cultivator.

The survey showed that the effects of the instruments depend on the tied up capital in the plant production. Based on this it can be thought that the low productivity of the farms is in connection with the low technical standard. [Lakatos et al. 1998] Because of the typical technical standard, most of the farms use machine lease work. The average of lease work is 3.4 hours/ha by wheat and 2.9 hours/ha by maize. 73% of the farms makes use of lease work.

The significance of animal husbandry is shown by the fact that 91% of the farms have stables.

Willingness for production cooperation

The low technical standard makes the cooperation necessary, which increases the affectivity and decreases the capital requirement [Takács 2000]. According
to the survey 39% of the farmers help to other farmers. The cooperation can usually be observed among relatives and friends. 60% of the farmers were member of a co-operative, and nobody wants to be a member of a similar organization.

36% of the interviewed persons told that they would not cooperate with some people personally. The production and marketing cooperation (56%) and machine associations (33%) are the most popular cooperative forms.

Income of families
Answering this question seemed to be the most difficult for the farmers. The data should be taken with a grain of salt. The low income of the families is the most important reason of the high share of self consumption. The payment in kind (with products, labour) is very typical. Naturally this has also value, the price can be calculated, but most of the farmers do not do that. 38% of the farms realize non-agricultural incomes. The average share of non-agricultural incomes is 60%, which moves between 17 and 90%. 65% of the farms returned agricultural income.

*The development of the farms can be suggested with the following principles:*

- The economic structure can not be changed significantly, which results many small farms, the development requires the increase of inputs (the quantity and quality of the nutrient and feed supply), machine associations and common marketing.
- As in the former period the chemical use was relatively low – on a high percentage of land farmers did not use artificial chemicals – organic farming could be a break-out point for the farmers.
- On the larger farms a pilot project can be done – accounted with land concentration – with different specialization, which results higher productivity.
- Unemployment can be decreased by activities integrated in the agriculture, which provides acceptable income.
- Changes in the border condition of the economic development will be realized, which results better quality and more marketable products and the products can be converted to the markets in good quality.

Conclusions, recommendations

The Romanian agriculture deserves special attention by reason of the natural facilities, and its role in the national economy and rural employment. The situation of the countryside and the agriculture are in a closer connection than in other European countries. The resources are not used optimally. The fragmented farm structure and the high labour capacity require a type of agriculture which is labour-intensive and has high profitability on small area. Such a way of agriculture is the organic production, the low chemical pollution of the lands and the traditional agricultural systems make a good basis for the modern organic farming. 1% of the arable land is organic today so it is worth to increase it. The increase of the added value is requirement for increasing the competitiveness of
products, to realize higher share of income in the country, to improve the trade balance. The increase of the processing capacity is possible with national and international investors and with cooperatives. With this latter solution farmers would realize the highest share of the income. Organic products can be produced cheaper because of the lower prices of the inputs and labour.

The production of high quality organic products requires the development of human capital, modern production methods and informing the farmers about the requirements of the organic production.

The low national consumption of organic products can be increased by better marketing and availability.

The production potential of Mezőmadaras is significantly higher than that is used. The low level of the human resource is an obstacle of increasing productivity. Most of the products are used in self consumption. The village as internal market is small. The accession to external markets is difficult because of the undeveloped infrastructure and unorganized distribution channels. The low quality of products declines the market positions.

The breakout points can be as follows:
- One possible way is – with the present markets – to increase the intensity of the crops production and animal husbandry, and the productivity and quality.
- The technical development of plant production, which would be based on the common machine use and on the present technical level.
- Increasing the milk yield, content and quality with feeding and change of the sires.
- Processing the milk as marketable products (yoghurt, cheese, cottage cheese).
- Another way is the certified, low input and high profitable organic agriculture, and processing products among developed cooperation and technical conditions.

The situation of Mezőmadaras is typical in Romania. There are many settlements and regions in similar socio-economic conditions. In these regions one development alternative is the coordinated development of the organic farming. The common machine use, marketing, education programs can serve as the basis of the modern organic agriculture.

On the small farms it is not worth to produce cereals, the more labour-intensive and profitable products can result higher income (fruit, vegetables, animal husbandry, milk production and processing).

The agricultural income (what was shown in the survey in Mezőmadaras) not results reasonable life standard for the rural people. Therefore the rural development programs should contain alternative income possibilities (tourism, and organic products, traditional life style, animal husbandry).
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