Prosperity factors of agricultural companies in the SR in the LFA after the EU integration

Faktory prosperity poľnohospodárskych podnikov SR v podmienkach LFA po vstupe do EÚ

Ľ. Szabo, M. Grznár

University of Economics, Bratislava, Slovak Republic

Abstract: The agricultural production in less favoured areas (LFA) should, first of all, fulfil the non-production goals, as is the nature and environment protection and job opportunities generation. These goals could be achieved within the conditions of sustainable agricultural production systems. This paper is aimed on the analysis of how the companies operating in marginal conditions realize commercial principles and targets specified for the LFA conditions. The obtained knowledge indicates that the managers of majority of the companies do not respect the recommendations and persist in the intensive production in spite of the unfavourable conditions.

Key words: less favoured areas, farm production structure, resources supply in LFA, results of farms in LFA

Abstrakt: Poľnohospodárska výroba v horších výrobných podmienkach (LFA) má plniť predovšetkým mimovýrobné ciele, ako sú udržovanie prírody, životného prostredia a poskytovanie pracovných príležitostí. Tieto ciele možno dosiahnuť v podmienkach udržateľných výrobných systémov poľnohospodárstva. Príspevok sa zameriava na analýzu, ako podniky hospodáriace v marginálnych podmienkach realizujú princípy a ciele hospodárenia, vymedzené pre podmienky LFA. Získané poznatky naznačujú, že manažéri značnej časti podnikov nerešpektujú odporúčania a usilujú o intenzívnu výrobnú činnosť aj v nevýhodných výrobných podmienkach.

Kľúčové slová: LFA podmienky, výrobná štruktúra fariem, zdroje fariem v LFA, výsledky fariem v LFA

Agricultural production is being held in very differentiated production conditions, which significantly influence the result of farming not only in the achieved fertility, utility and in volume of produced commodities, but also in the financial results of enterprises. Among the objective factors, there belong land and its quality, natural and climatic conditions, as altitude, length of the vegetation period, structure of agricultural land, the company size and other.

The income from operations is conditioned also by the scale of subjective factors. Among these factors, there belong first of all managerial knowledge and competences of the owners or managers, the ability to find the best solution of decisive situations and problems.

In our paper, we deal with agricultural enterprising in less favoured areas (LFA – Less Favoured Areas) in the SR after the EU integration. The importance of these areas is highlighted by the fact that they create about 57% of agricultural land in the SR and there operate several hundred entrepreneurial companies, which achieve very differenced production and economic results.

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MATERIALS AND METHODS

By the EU integration, the SR accepted the classification of agricultural production conditions based on the Unions criteria as one of the aspects for assessment of the support from the European Agricultural Guidance and Guarantee Fund (EAGGF), which is aimed at agricultural support and rural development. One of the new categories is also the area with less favourable natural conditions (LFA).

The determination of less favoured areas, which are the subject of receiving a special support for the purpose of preservation of agriculture and enterprising at all in less favoured areas and supporting sustainable economy systems, was implemented based on the EU criteria and it includes:

– mountain areas
– other less favoured areas
– areas with special disadvantages
– areas with environmental disadvantages

The classification of less favoured areas in the SR was proposed for the EC by Fitz and Molčanová (2004), based on this proposal the structure of LFA in the SR in 2006 is shown in Table 1.

The Agricultural Payment Agency received in year 2006 in total 3 988 applications for the support of farming in the LFA and the land LFA for which the contribution was approved, created 1 135 522 ha, what is close to the initial project (The Report on Agriculture ... 2007)

The major part of the initial land fund in the SR, according to the EU criteria, belongs to the less favoured areas. For farming in the LFA conditions, in the terms of the Common Agricultural Policy (CAP), it is being assumed that it would be oriented on the preservation of agriculture, on the preservation and support of sustainable economic systems, on the protection of the environment, preservation of the character of rural settlement, but also on ensuring the appropriate profit of agricultural subjects. It is similar to the way how also the politic under LFA conditions is oriented in the Czech Republic (Štolbová 2007).

Table 1. Aggregate table of LFA

	ha p.p.	%
Mountain areas	485 423	21
Other less favoured areas	390 500	17
Specifically handicap areas	349 095	15
Areas with environmental restrains	126 139	5
LFA in total	1 351 157	57
The land not categorized into LFA	1 088 251	43
Slovak Republic in total	2 439 408	100

Sources: Ekonomika poľnohospodárstva, 2004, (1): 41

We would like to pay attention to the behaviour of entrepreneurial subjects, which are operating under the LFA conditions, to analyze their approach to chosing the entrepreneurial structure and adopting business decisions about the company performance, production intensity and its development. We will assess also the impact of the allocated grants on the choice of production structures and on the company profit.

The time frame of our analysis covers the year 2005 and 2006. The source of the information base, for our analysis, are the data from the CD MP SR, kept by the VÚEPP in Bratislava, which were obtained from the Information Letters of entrepreneurial subjects, as well as the available data from the Report on the State of Agriculture and Food Industry in the SR for the years 2005 and 2006. Into the group of companies operating in less favoured areas, there were classified companies with more than 50% of land area under the LFA.

We used the methods of analysis and synthesis, comparison and statistical sorting.

RESULTS AND DISCUSSION

The criteria and goals of enterprising according to the EU for entrepreneurial subjects operating under the LFA conditions prefer preservation of sustainable economy systems, environmental protection and other, including a appropriate profit for farmers, needless to say. For the market oriented companies, there are typical the criteria of a quicker output growth compared to the input increase, or in combination: to produce more outputs and reduce inputs, or to decrease outputs more slowly than inputs (Neely et al. 2005). It seems that the two last mentioned efficiency criteria are compatible with sustainable development. Agriculture is considered as a basic factor of the countryside development. Hazzel et al. (2007) mention that agriculture forms the potential for job creation, income increase and return on assets. However, they add that during the last years, agricultural development is more complicated and more difficult, compared to the previous periods. One of the most important elements in the company development is the demand monitoring and the integration into the market system.

Our following analysis could indicate how the LFA companies behave at the present regarding the efficiency criteria. In methodology, we continue with our

research on the efficiency management in production areas in the SR (Grznar, Szabo 2006).

The results of company management in the productive and LFA areas

Among the achieved results of companies in productive and less favoured areas, adjusted on unit of land, are large differences within the main final economy indicators. They are described in Table 2.

Returns and costs per unit of area of agricultural land, achieved by the LFA companies, reach only half of the level achieved in companies in the productive areas, what basically is in compliance with the sustainable economy. Similarly develops also the level of the purchased input. The personal costs under the LFA conditions exceed this level only moderately, when they achieved about 60% of the level in productive areas.

The proportion of companies achieving profit is slightly higher in the LFA, what is caused by a higher level of common subsidies, comparing to productive areas. Similarly, in labour productivity from returns, companies in the LFA areas only moderately fall behind the productive areas.

The biggest contrast between the results of observed companies is in the indicator of Gross Value Added per unit of the land area. The LFA achieve less than one third of the level achieved in productive areas. These companies do not create the adequate opportunities for the added value generating.

LFA conditions in the agricultural regions

The administrative segmentation of the SR into regions (NUTS 3) creates, in the term of the LFA share, differentiated conditions for agricultural business and its results (Table 3).

A look on the structure of the production potential of the individual regions indicates varied source capabilities. The largest difference is clearly in the share of arable land, in the share of the usable area, as well as in the share of less favoured natural conditions. The highest share of the LFA is in Prešov, Banska Bystrica, Košice and Žilina regions. It creates different preconditions for farming and the selection of production structures within the regions.

Organic use of land is an important form of alternative agriculture, for which a higher share of the LFA creates favourable preconditions (Stehlo, Buday 2007). In the regions with a high share of the LFA there is, however, generally a low percentage of land area under organic farming only, what testifies to the absence of marketing and managerial thinking of the companies. The regions with a higher LFA share show a higher land area per 1 worker.

Table 4 presents an overview of the structure of the activities which bring revenues in the individual regions in the year 2005.

The revenues from plant production and animal husbandry overreached one half of the total revenues only in the case of two regions. Revenues from organic production in plant production and animal husbandry create only a small share of revenues from agricultural production, but in case of two regions, this percentage is more considerable. The agro-tourism is the most developed in the Žilina and Banská Bystrica regions. A significant share of revenues in three regions is created by subsidies, which are influenced by the low level of revenues in the specific LFA conditions.

In the regions with favourable land-and-climatic conditions, there prevail the revenues from plant

Table 2. Comprehensive economic indicators in the LFA and production areas (PO, 2005)

Indicator	Areas		% LFA from production
	productive	LFA	
Yields (SKK/ha)	63 452	34 207	53.9
Gross value added (SKK/ha)	12 298	3 323	27.0
Costs (SKK/ha)	62 931	34 147	54.3
Personal costs (employment (SKK/ha)	10 648	6 410	60.2
Common subsidies (SKK/ha)	6 760	7 821	115.7
Share of profit enterprises (%)	72	77	–
Labour productivity from yields	1 438	1 130	78.5
Input (SKK/ha)	33 945	17 207	50.7

PO = legal forms, agricultural cooperatives and trade companies

Sources: Správa o poľnohospodárstve a potravinárstve v SR 2006, p. 85

production, whereas in the regions with a large LFA share, there prevail the revenues from animal husbandry.

Sustainable development or intensive growth in the LFA conditions?

The production conditions in areas defined as the LFA are not suitable for intensive, market oriented production and the companies operating in these conditions should orientate themselves on sustainable agriculture and the maintenance of healthy environment. We tried to analyze the rate of respecting these requirements on the data received from companies operating in the LFA conditions in year 2006. The data from all companies are presented in Table 5.

The companies were sorted based on revenues per unit of the area into the five groups and the last column presents the average for all companies in the LFA.

Less than half of 798 companies – corporate entities situated in the FA – operate with low intensity, which is less than half of the average of all companies. Similar relations are also in the indicator of production consumption, number of workers and also in the use of long-term tangible and intangible assets. This first group of companies draw the highest subsidy per unit of area. Is it possible to characterize this group of companies as fully oriented on the sustainable development? In order to say so, we unfortunately do not have the sufficient data about the stability of these companies in the long-term and we cannot identify the predominant type of the reproduction process.

More than half of all the examined companies is operating with a higher intensity, invests more inputs

Table 3. Agricultural natural sources in regions in the Slovak Republic (2005)

Region	ALU	% arable land.	% ALU with irrigation	% LFA per ALU	% organically farmed ALU	ALU in ha per 1 employees
BA	81 311	81.8	28.2	44.2	6.2	24
TT	216 592	91.3	25.5	13.8	1.45	22
TN	113 784	69.4	5.3	70.0	1.2	22
NR	292 913	94.6	13.5	11.3	1.06	24
ZA	139 432	31.2	0.3	82.4	10.6	31
BB	205 269	54.3	1.4	79.8	5.2	36
PO	220 599	47.9	0.03	90.6	7.5	34
KE	204 596	70.2	0.4	84.3	3.5	41

ALU = agricultural land used
BA = Bratislavský kraj, TT = Trnavský, TN = Trenčianský, NR = Nitriansky, ZA = Žilinský, BB = Banskobystrický, PO = Prešovský, KE = Košický

Sources: CD MP SR, VÚEPP Bratislava (2006), own calculations

Table 4. Structure of production in the individual regions in % (2005)

Region	Agrarian output/yields	Subsidies/yields	Organic output/ agricultural output	Agro-tourism output/agricultural output	Plant production output from agricultural output
BA	37.3	9.0	1.5	0.1	61.6
TT	56.8	7.7	1.5	0.5	50.7
TN	48.6	11.0	0.6	0.4	34.4
NR	54.6	8.8	0.5	0.07	57.3
ZA	40.5	23.7	3.0	1.5	13.8
BB	49.2	22.7	0.2	0.9	33.1
PO	37.2	27.8	2.5	0.2	31.2
KE	36.4	16.8	0.7	0.3	47.4

Sources: Item, own calculations

in the form of production consumption, tangible assets or in the form of labour costs and achieves also higher revenues. The last group of companies is comparable with the companies operating in productive conditions, in terms of revenues and the invested sources.

Let us analyse how efficiently the enterprises in the LFA use their production sources and what is the rate of disparity among the achieved financial results.

Based on the business income (profit or loss), we can recognize that the first group of enterprises, and these are the companies with the lowest production intensity, is approximating the sustainable type of economy, as the business income is positive despite the low production and low employment of production sources. This income is almost the highest within the group of enterprises. On the other side, the group of enterprises with the highest incomes per land area reported a very high loss. It can confirm the opinion that in the LFA conditions, the high intensive farming is not proper. Despite that, the groups of companies 2–4 reported the amount of profit which stagnated regardless of the increasing production inputs. The only positive effect here is the increase of the efficiency of production consumption, measured as the total value of production per unit of production consumption.

Although labour productivity expressed as the revenues per 1 worker achieves the highest level in the last group of companies, it is, however, also similar to the average of the first group and there are no significant disparities among the groups. The subsidy per worker is the highest in the first group and it decreases in all other groups, what is in compliance with maintenance of settlement in the marginal conditions and with sustainable economy.

One of important items of farming in the LFA conditions is cattle breeding. The increase of the beef cattle density in the animal breeding copies also the intensity increase, as the intensity is increased from the first to the last intensive group.

Table 7 shows the correlation dependences expressed as the calculation of correlation coefficients in the case of the selected indicators.

Table 5. Resources supply in enterprises in the LFA (SR, 2006)

Indicator	Group					Average
	1	2	3	4	5	
Number of enterprises	350	98	79	113	158	798*
Yields (SKK/ha)	15.978	21.478	26.465	31.206	43.287	31.911
Input (SKK/ha)	8.129	10.642	12.925	15.868	22.462	16.338
Long-term tangible property (SKK/ha)	11.297	20.619	22.839	27.853	34.628	26.272
Ordinary recognized support (SKK/ha)	7 331	7 091	7 124	7 249	6 658	6 981
Workers per 100 ha a.l.	1.5	2.2	2.7	2.9	3.3	2.7

*total

Sources: CD MP SR, VÚEPP Bratislava (2006), own calculations

Table 6. Efficiency of the enterprises in the LFA (SR, 2006)

Indicator	Group 1	Group 2	Group 3	Group 4	Group 5	Average
Number of enterprises	350	98	79	113	158	798*
Profit/loss (SKK/ha)	819	384	380	440	–660	29
Input (SKK/ha)	6 676	11 351	14 959	19 427	28 158	19 381
Production/input	0.821	1.067	1.157	1.224	1.254	1.186
Yields/workers (1 000 SKK)	1 034	988	968	1 075	1 325	1 182
Basic herd heads per 100 ha a.l.	18,5	21,7	25,9	29,0	32,0	27,2
Ordinary recognized support SKK per employee	474	326	261	250	204	259

*total

Sources: CD MP SR, VÚEPP Bratislava (2006), own calculations

Table 7. Correlation coefficient of the selected indicators in the LFA enterprises, 2005

Indicator	Production	Basic herd	Input	Ordinary recognized support
Production	–	0.974	0.998	–0.819
Basic herd		–	0.978	–0.665
Input			–	0.736

Source: Own calculation

Relatively strong correlation dependences we find between the production consumption and production and between the production and the numbers of beef cattle. The common subsidies positively influence only the production inputs. The correlation coefficients expressing the dependency of common subsidies and production and common subsidies and the quality of beef cattle reach negative values.

CONCLUSION

The high share of unfavourable production conditions, classified as the LFA in the Slovak agriculture, requests attention paid to the management orientation of these subjects. The focus on sustainable development, environment protection and alternative economy systems has not been fully manifested yet. The analysis of enterprises in the LFA conditions shows that the significant part of companies stillpersist in the intensive forms of farming, whereof they achieve a relatively small economic effect.

The intensive company interest in achieving the support assigned to less favoured areas, on one hand, confirms the interest of agricultural maintenance, but on the other hand, the entrepreneurial subjects obviously do not know the managerial principles for these specific forms and do not search the possibilities for innovation of the production structures.

REFERENCES

Fitz M., Molčanová J. (2004): Klasifikácia a podpora znevýhodnených oblastí po vstupe do EÚ (Classification and support of localities with disadvatangeous conditions after entering the EU). Ekonomika poľnohospodárstva, (1): 39–46; ISSN 1335-6186.

Grznár M., Szabo Ľ. (2006): On some potential competivive advantages of the Slovak agricultural enterprises in the EU. Agricultural Economics – Czech, *52* (10): 471–475.

Hazell P., Poulton C., Wiggins S., Dorward A. (2007): The Future of Small Farms for Poverty Reduction and Growth. International Food Policy Research Institute, May.

Neely A., Gregory M., Platts K. (2005): Performance measurement system design: A literature review and research agenda. International Journal of Operation & Production Management, *25* (12): 1228–1263.

Správa o poľnohospodárstve a potravinárstve v SR 2006, 2007 (2006, 2007) (The Report on Agriculture and Food Industry). MP SR, Bratislava.

Stehlo P., Buday, Š.: Stratégia multifunkčného trvalo udržateľného poľnohospodárstva. (Strategy of multifuncional sustanaible agriculture). Ekonomika poľnohospodárstva, (1): 15–26; ISSN 1335-6186.

Štolbová M. (2007): Comparative analysis of less-favoured areas payments in the EU states. Agricultural Economics – Czech, *58* (10): 455–465.

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Contact address:

Ľuboslav Szabo, Miroslav Grznár, University of Economics, Dolnozemská 1, 852 35 Bratislava, Slovak Republic
e-mail mirog@euba.sk, szabo@euba.sk