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CENTRE OF AGRICULTURAL SCIENCES  
FACULTY OF AGRICULTURAL ECONOMICS AND RURAL DEVELOPMENT  
DEPARTMENT OF LABOUR SCIENCES

DOCTORAL SCHOOL OF MULTIDISCIPLINARY SOCIAL SCIENCES

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PhD thesis

DEVELOPMENT CHANCES OF SETTLEMENTS OF STATISTICAL SUBREGION  
OF NAGYKÁLLÓ WITHIN  
THE SCOPE OF RURAL DEVELOPMENT

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DEBRECEN

2003

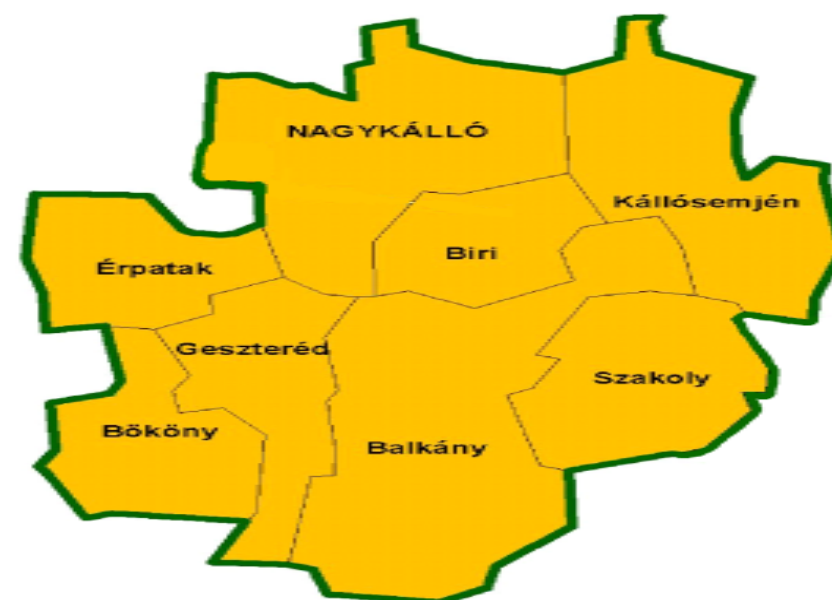
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## 1. AIMS OF THE RESEARCH

In Hungary the word rural became fashionable after change of the regime but particularly coming to the front of regional development. Rural development can be regarded as a relatively new phrase also in the European Union. In our country its position is taking shape as the result of co-operation between agricultural and regional development. The rural development as a dynamically developing scientific area has effects directly and indirectly on the local economy, community and environment.

**Statistical Subregion of Nagykálló**, which is the matter of my research, is a small region extending to 8 settlements settling down Szabolcs-Szatmár county in the south part of Middle-Nyírség. The small region represents a mini one but it can not be considered as a nature-geographically defined area. The region endeavours to help the inhabitants of the area to live on a higher living standards by ensuring harmonising developments of agriculture, industry, commerce and infrastructure.

Figure 1: Settlements of Statistcal Subregion of Nagykálló



Source: Hungarian Regional Development and Urbanistical Public Utility Company (2001)

## My aims are the followings:

- To systematize domestic and international specialized literature in rural development
- To introduce methods for determining of rural areas, to contribute to the establishment of methodological rural development. In the focus of my research is to answer to a question that 19 indices of complex measure numbers which is used by the Central Statistical Office is enough to estimate development of settlements in the Statistical Subregion of Nagykálló.
- To examine the situation; economic, environmental-ecological and social development Statistical Subregion of Nagykálló starting from the region's economic, environmental-ecological and social function.
- To analyze situation of the agriculture of Statistical Subregion of Nagykálló before changing of the regime and today.
- To analyze different subsidies granted for the settlements of Statistical Subregion of Nagykálló. To examine how subsidies are in harmonisation with the economic, environmental-ecological and social development of the settlements.

## 6. PUBLIKATIONS IN THE SUBJECT OF THE RESEARCH

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14. **Neue strategische Konzepte und die Entwicklung des ländlichen Raumes. A vidéki térségek fejlesztése Magyarországon és Németországban.** DAAD Projekt. Universität-Rostock, 1998. 55-72.p. /Társszerzők: Nemessályi Zsolt - Darabos Éva/.
15. **A terület- és a vidékfejlesztés problémái Magyarországon.** V. Ifjúsági Tudományos Fórum PATE, Keszthely, 1999. 371-374.p.
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17. **Environmental effects of wheat production especially of use of by-products.** Kolozsvár, 1999. /Társszerzők: Nábrádi András, Bai Attila, Buzás Ferenc/.
18. **A rurális térségek lehetőségei és veszélyei.** MTA Szabolcs-Szatmár-Bereg megyei Tudományos Testülete, BGYTKF Nyíregyháza, 1999. 61.p.
19. **A vidék és a vidékfejlesztés fogalma.** DAB Konferencia. Debrecen, 1999.
20. **A vidék és Hajdú-Bihar megye kapcsolata.** A Fialat Magyar Tudományos Kutatók és Doktoranduszok Harmadik Világtalálkozója. Tavasz Szél. Budapest, 1999. 51.p.
21. **Neue strategische Konzepte und die Entwicklung des ländlichen Raumes. Die Beurteilung der Entwicklung der ländlichen Raumen in Ungarn und in Deutschland.** DAAD Projekt. Universität-Rostock, 1999. 63-84.p. /Társszerző: Nemessályi Zsolt/.
22. **A vidéki térségek fejlettségének megítélési lehetőségei.** A térségfejlesztés és munkaszervezési összefüggései Nemzetközi tanácskozás II. Debrecen, 2000. 221-224.p.
23. **Nagykállói statisztikai körzet mezőgazdaságának fejlesztési lehetőségei.** Fialat Magyar Tudományos Kutatók és Doktoranduszok Negyedik Világtalálkozója. Tavasz Szél. Gödöllő, 2000. 61.p.
24. **Die Abgrenzung des ländlichen Raumes in Österreich.** MTA Szabolcs-Szatmár-Bereg megyei Tudományos Testülete, BGYTKF. Nyíregyháza, 2000. 82.p.
25. **Förderung der ländlichen Entwicklung.** MTA Szabolcs-Szatmár-Bereg megyei Tudományos Testületének Konferenciája. BGYTKF Nyíregyháza, 2000. 82.p.
26. **A vidéki turizmus lehetőségei a németországi Mecklenburg - Vorpommern tartományban.** XXVIII. Nemzetközi Óvári Tudományos Napok. Mosonmagyaróvár, 2000. III. kötet, 195-199.p.
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## 5. PRACTICAL UTILIZATION OF THE RESULTS

I introduced economic, environmental-ecological and social status of Statistical Subregion of Nagykálló to the smallest detail in order to extend material of knowledge utilized by the experts. Results of the dissertation can be utilized in education, research and consultation.

- The special literature review can be utilized in *education* as it newly interprets and systematizes concepts, basic categories connecting to region and regional development, furthermore it gives new synthesis of aims and duties of regional development.
- In *research* methodological review and practical utilization of indices applied for the judgement of settlements' development. Further researches have not been finished as the method can be developed by including other economic, environmental-ecological and social indices.
- The dissertation collected and systematized economic, environmental-ecological and social data of settlements of Statistical Subregion of Nagykálló, thus a systematic data base has been obtained which can be utilized in the *consultation*. This data base could contribute to preparing regional development plans and applications, to the establishment of effective regional development system, furthermore to urging of regional development basing on local initiatives.

## 2. APPLIED RESEARCH METHODS

I suppose that demand for developing of methods used for estimation of countryside areas development is a new requirement in the present economic situation. Colleagues of Central Statistical Office and Scientific Institute of Great Plain of Hungarian Academy of Sciences has reached achievements with writing up widely and analyzing on high level part of the matter I chose, but several other researchers and economic specialists have examined connecting scopes of the matter.

I participated in instructional trips several times in the Agricultural University of Vienna in Austria, in University of Rostock and University of Hohenheim in Germany. The international specialized literature of regional development is extremely extended. The acquainted foreign sources of special literature are included in each chapter.

I interpret in the specialist literature review the most important rudiments of country, country area and rural development used in Hungary and in the European Union. Afterwards I examine establishment of rural development politics and describing of the most important methods used for the estimation of the development of country area. The specialist literature review finishes with the introduction of the functions of rural development, planning of the rural development and introduction of the statistical classification system.

Central Statistical Office uses a complex index number consisting of 19 indices in order to estimate development of settlements which I differentiated according to the economic, environmental-ecological and social functions of the country, and I utilized further indices to examine it more thorough.

I surveyed economic, environmental-ecological and social situation of Statistical Subregion of Nagykálló in winter 2000. The survey was helped by the mayors, farming officials, town clerks and inhabitants of the settlements. And data collecting was completed with critical interviews, I also got subjective experience which helped my work considerably.

The economic, environmental-ecological and social data collecting of settlements was helped by data base of several institutions, such as:

- Hungarian Regional Development and Urbanistical Public Utility Company,
- Ministry of Agriculture and Regional Development,
- State Agricultural Registration, Central Statistical Office,
- Directorate of Central Statistical Office of Szabolcs-Szatmár-Bereg County,
- Office for Ministry of Agriculture Regional Development of Szabolcs-Szatmár-Bereg County,
- Upper Tisza Environmental Inspectorate,
- Environment Protectional Supervisory Board of Szabolcs-Szatmár-Bereg County,
- Office for Loss Adjustment of Szabolcs-Szatmár-Bereg County,
- Companies' Registry of Szabolcs-Szatmár-Bereg County,
- Archives of Szabolcs-Szatmár-Bereg County,
- Agricultural Chamber of Szabolcs-Szatmár-Bereg County,
- Association for Protection of Interests of Agricultural Producers of Szabolcs-Szatmár-Bereg County,
- and documents of Local Authorities of Statistical Subregion of Nagykálló.

The Hungarian Regional Development and Urbanistical Society placed the mass of facts of Informatics System of Regional Development and Arrangement at my disposal which made possible to survey Statistical Subregion of Nagykálló from points of economic, environmental-ecological and social.

In the focus of my further examination is to analyze agricultural situation of large-scale farms (7 agricultural co-operatives and 1 state farm) before change of the regime and at present (1 share company, 1 limited liability company, 8 co-operatives).

Examining effectiveness of farming in 3 consecutive years in agricultural enterprises working in both plant production and animal breeding reliable and real results were reached. Companies farmed profitably still in 1987, 1988 and 1999. Therefore I used productional results of 1987, 1988 and 1989 for analyzing data of the past and results of 2000 for analyzing the present situation. I introduce current situation of 3 farms on different years because they are in liquidation or in final settlement. These three farms are the followings:

Agricultural production of large-scale farms of Statistical Subregion of Nagykálló has decreased after change of the regime. Change of volume, price and value of production were analyzed with indices. Examinations prove that production volume in plant production decreased down to averagly 82 % and in animal husbandry averagely 91 % in comparison with production volume of period 1987-1989. Decline in production value was caused by fall in quality of produced products, as price index increased up to averagly 370 % in the period. Farms which' production decreased considerably have already been liquidated or closed down.

It can be stated that in Statistical Subregion of Nagykálló change of former farming forms and compensation did not achieve the purpose to develop a successful agriculture basing on private ownership and family farm structure. In the subregion most part of the inhabitants, 15,8 th persons, work in the agriculture and for most of them agricultural production did not mean income supplementation but the only source of living.

Different support sources available in the subregion were analyzed in details. Examinations show that while dividing the different support sources in the future it is expedient to rely considerably on the development status of the settlements of the subregion. For foundation of the decisions sequence of settlements deriving from the three functions - economic, environmental-ecological, social - of the regional development has to be taken into consideration.

#### 4. NEW RESULTS OF THE THESIS

The thesis systematized and somewhere interpreted concepts and basic categories of region and regional development from new aspects, furthermore it gives new approach of the functions of regional development and the duties deriving from it.

Rural development includes all activities aiming improvement of economic, environmental-ecological and social status of inhabitants living in the countryside. One of the most important duties is to develop disadvantaged, peripheral country regions and to improve their ability to develop. Analyzing data of density of population it can be stated that most of the Eastern village settlements have large boundaries and it follows that the candidate agrees with those who suggest using less than 120 person/km<sup>2</sup> threshold value for defining regional area.

In the dissertation it was attempted at methodological development and practical application of indices used for evaluation of development of settlements. Enlarging the system of indices first of all complex index applied by Central Statistical Office has been differentiated according to economic, environmental-ecological and social aspects. As a result of it, development sequence of examined settlements has changed comparing with the sequence received by the calculation of complex index of CSO. There are particularly considerable differences in the evaluation of environmental-ecological development but some time sequence of economic and social development of the settlement is also different. These experiments prove that evaluation of development of settlements could be more objective using more indices and contradictions would be more conspicuous if indices were classified by the three functions of the country.

According to the analysis of farms of Statistical Subregion of Nagykálló before the change of the regime it can be stated that Nyírség MGTSZ (Nagykálló), State Farm of Balkány (Balkány) and Szabolcs MGTSZ (Balkány) were between the best farms. Between 1987-1989 State Farm of Balkány and "Egyetértés" MGTSZ (Szakoly) had the most favourable efficiency indices.

1. "Új Élet" Agricultural Productional, Marketing and Servicing Co-operative (Kállósemjén) 1994,
2. "Új Forrás" Agricultural Productional and Servicing Co-operative (Biri) 1999,
3. "Új Hajnal" Agricultural Productional and Servicing Co-operative (Érpaták) 1999.

Besides the economic importance of the matter, the considerable narrowing down of the statistical information system of the county and the country since change of the regime gave cause for my examinations. Therefore I suppose that information deriving from the farms from first hand and reflecting the actual situation became more valuable. In some cases collecting of former data made difficulties, in other cases data seemed to be deficient which were completed with the experience of personal interviews with presidents, agricultural engineers and employees of the co-operatives.

Estimation of the effectiveness is in the focus in analyzing of the results of farming. For analyzing I used effective index system developed by the Department of Farm Business Management in the 1980's. I calculated several interpretable indices of land, animal, work power, instruments, production value, production costs and income.

I demonstrate change of volume, price and value of the production with indices. Collecting of average price of buying-up of farms encountered difficulties so I used data base of several institutions, such as:

- Agricultural Economy Research and Informatics Institution, Budapest,
- Agricultural Food-industrial Statistical Almanac, Central Statistical Office, Budapest,
- Universal Leaf Tobacco, Nyíregyháza,
- Sheep Product Council, Szikszó,
- Data of study-aid for planning of agricultural entrepreneurs submitted by Department of Farm Business Management of DATE were also taken into consideration.

Part of the collected data are natural while other parts are in terms of money. The most work was searching and completing of production data of farms. I prepared data for analyzing works by systematizing them properly and controlling their veracity more times.

Primary source of used data were the reports of annual meetings, profit and loss statements, supplements and statistical reports of the companies. I systematized economic, ecological and social status of Statistical Subregion of Nagykálló into tables and I introduced it also by figures.

The dissertation intends to determine framework of research scopes of rural development within agriculture economy as a branch of science. According to the characteristics of research scopes it uses results of regional economy and fits into the requirements of general economy by connecting agriculture and regional economy.

The dissertation functionally fits into the former agricultural economic PhD. program entitled "Economy of agricultural entrepreneurs and regional development" with special regard to the economic subject of regional development.

I made it my duty to help with my work the task of local governments, enterprises, regional development societies, and regional development work of small regional managers.

The amount of regional development and agricultural supports per one person did not follow this sequence. The sequence modified and Biri awarded the largest amount which was succeeded by Geszteréd, Balkány, Szakoly, Nagykálló, Kállósemjén, Bököny and Érpatak.

To estimate economic development of settlements I included index showing regional development and agricultural supports for one person. It can be stated from data of Table 7 that sequence of the settlements' complex, economic, environmental-ecological and social development does not coincide with the sequence of regional development and agricultural supports for one person.

Objects of *National Agro- Environmental Program* are suitable for the conditions of different areas, to develop adjusting sustainable agricultural leasehold to harmonize with 2078/92 EEC Council Regulation. In the region application spirit seemed to be very weak. In 2002 5 applicants (4 private entrepreneurs and 1 joint venture) joined to the National Agro-Environmental Program with 32 ha. Studying the areal division of the applicants Nagykálló (4 applicants) and Szakoly (1 applicant) sent applications. These applicants received 544 420 Ft support.

Most of regional development supports were awarded to the largest and the most developed settlements. Principle of proportional division did not make it possible to line up the - desirable - underdeveloped areas, it preserved the earlier status. But underdeveloped settlements have received agricultural supports. Only Nagykálló and Szakoly joined to National Agro-Environmental Program.

Altogether it can be stated that supporting system is complex, method of division is difficult to understand, furthermore help should be given for the inhabitants of Statistical Subregion of Nagykálló in preparing successful applications. In the future division of different support sources it is practical to rely considerably on the developing status of the settlements of the region. Sequence of the settlements deriving from the three functions - economic, environmental-ecological, social - of regional development has to be taken into consideration for foundation of decisions.

Table 7

**Supports of regional development, agriculture and National Agro- Environmental Program in Statistical Subregion of Nagykálló**

Name	Balkány	Biri	Bököny	Érpaták	Geszteréd	Kállósemjén	Nagykálló	Szakoly
<b>Regional development support, 2001</b>								
Total, th Ft	2000	-	15 662	-	4000	6020	82 760	2440
Regional development support, th Ft/person	0,29	-	4,72	-	2,19	1,51	7,65	0,83
<b>Agricultural support, 2001</b>								
Total, th Ft	199 928	200 279	18 397	14 876	95 857	40 201	177 058	81 196
Agricultural support th Ft/person	29,36	141,04	5,54	8,01	52,58	10,11	16,37	27,71
<b>Regional development and agricultural supports, 2001</b>								
<b>Total, th Ft</b>	<b>201 928</b>	<b>200 279</b>	<b>34 059</b>	<b>14 876</b>	<b>99 857</b>	<b>46 221</b>	<b>259 818</b>	<b>83 636</b>
<b>Support th Ft/person</b>	<b>29,65</b>	<b>141,04</b>	<b>10,26</b>	<b>8,01</b>	<b>54,77</b>	<b>11,62</b>	<b>24,02</b>	<b>28,54</b>
<b>Sequence</b>	<b>3.</b>	<b>1.</b>	<b>7.</b>	<b>8.</b>	<b>2.</b>	<b>6.</b>	<b>5.</b>	<b>4.</b>
<b>Development sequence (own)</b>								
<i>Complex</i>	5.	6.	7.	8.	4.	3.	2.	1.
<i>Economic</i>	2.	6.	8.	7.	3-4.	3-4.	1.	5.
<i>Environmental-Ecological</i>	7-8.	2-3.	5.	4.	2-3.	6.	7-8.	1.
<i>Social</i>	4.	6.	5.	8.	7.	2.	1.	3.
<b>National Agro-Environment Program, 2002</b>								
Total, Ft							414 020	130 400
NAEP Ft/person							38,28	44,5

Source: own calculation (2003)

In 2001 8 settlements of Statistical Subregion of Nagykálló received 112 882 th Ft *regional development subsidies*. Aims of *agricultural supports* were to ensure competitiveness of agriculture. Settlements of the district received 827 792 th Ft agricultural supports in 2001. Biri awarded the largest amount subsidies (200 279 th Ft) and the smallest amount (14 876 th Ft) was received by Érpaták.

Studying amount of the available *regional development and agricultural supports* it can be stated that the largest support was given to Nagykálló (259 818 th Ft) which was followed by Balkány (201 928 th Ft), Biri (200 279 th Ft), Geszteréd (99 857 th Ft), Szakoly (83 636 th Ft), Kállósemjén (46 221 th Ft), Bököny (34 059 th Ft) and Érpaták (13 685 th Ft).

### 3. IMPORTANT FINDINGS OF THE THESIS

#### 3.1. Determination of country and rural development

The dissertation interprets and systematizes from new aspects the concepts of country and rural development, furthermore it suggested a new synthesis for the aims, functions and means of rural development.

Determination of the country and rural area is not only technical or methodological issue, but the system, aims, methods and resources of rural politics also depends on it.

During my research I stated that various meaning of the country can be observed also in the international special literature which is different depending on agricultural structure, cultural and historical traditions. Thus determination of country is an essential work both in Hungary and in the countries of the European Union.

Analyzing data of density of population it can be stated that most of the villages in the Eastern part of the country have large boundaries and it follows that the candidate agrees with those who suggest using less than 120 person/km<sup>2</sup> threshold value for defining rural area.

Rural development includes all activities aiming improvement of economic, environmental-ecological and social status of inhabitants living in the countryside (less than 120 prs/km<sup>2</sup> density of population). The most important function of rural development is to develop disadvantaged, peripheral country regions and to improve their ability to develop.

### 3.2. Development of settlements in Statistical Subregion of Nagykálló

#### Determination of development of settlements by Central Statistical Office

Settlement development examinations prepared according to nationally admitted, uniform professional principles admitted by the country are very essential in order to distribute equitably of central resources for territory and settlement development, to award national and county applications, to found territory and settlement development plans.

Evaluation of development of settlements by objective calculations is necessary annually. As to see the situation correctly is essential also for political decision-makers and managing bodies of settlements. Settlement level examinations are the basis of subregional, county and regional development examinations as territory units consist of settlements classing among it, thus their development level are defined according to the indices of the settlements.

From 1999 *Central Statistical Office (CSO)* utilize a complex index number consisting of 19 indices for evaluation of the development of settlements. National average of the calculated complex index number is 3,91, in the Northern Great Plain Region its average is 3,51, while *in Statistical Subregion of Nagykálló it is 3,48*. Balkány (4,79), Érpatak (3,68) and Szakoly (3,58) exceeds development level of the average Northern Great Plain Region, whereas Bököny (3,32), Nagykálló (3,26), Geszteréd (3,11), Kállósején (3,11) and Biri (3,05) are under the average of the region.

Moreover some settlements (Balkány, Biri, Bököny, Érpatak, Geszteréd, Szakoly) are in the group of settlements struck by unemployment as ratio of lasting unemployment - over 180 days - exceeded half as much of the national average, 12,5 %. Nagykálló and Kállósején are not involved in this category.

#### Determination of development of settlements according to my research

I classified 19 indices of CSO accordingly economic, environmental-ecological and social functions of the region. I found 9 - 9 indices which qualifies economic and social status and only one which gives expression also to environmental-ecological status. Besides the 19 indices I suggest 22 other indices for evaluation of complex development status of the region.

- Operating farms ran almost entirely on hired lands. *Land territory* scattered between 124 and 877 ha in 2000.
- In 2000 the greatest *working power staff* - 151 persons - was in "Aranyszablya" Agricultural Productional and Service Company. Staff of other farms has decreased.

Volume of production considerably decreased, large-scaled farm structure closed down and any other operational managing system has not developed.

Succession organizations of the examined farms are farming on less than 8 % of the territory and more than 92 % are cultivated by primary producers and private entrepreneurs.

Land was broken up, material means of production and plantations became old and farms switched to reduced cost management. There has not been formed neither enough income nor innovational source.

### 3.5. Supports in Statistical Subregion of Nagykálló

Statistical Subregion of Nagykálló can get supports from several sources. Regional Development Council of Szabolcs-Szatmár-Bereg county tacitly divided available regional development sources between the statistical regions till 1999, small regions decided about awarding supports which began unfavourable processes.

The Council abolished this system in 1999 in order to establish division which is in the interest of the county, ordered awarding of the supports on its own authority. Relative disproportion of development supports is connected with the fact that entrepreneurial spirit is comparatively smaller than in any other part of the county.

The largest supports are regional development and agricultural ones, while supports of National Agro- Environmental Program negligible from the viewpoint of developing the area.

Table 5

**Application for out business share in the co-operatives of Statistical Subregion of Nagyálló**

Name	Given-in application pcs.	Paying Ft	Refused application pcs.	Refused amount Ft
“Aranyszablya” Agricultural Productional and Trading Co-operative (Geszeréd)	3	558 000	-	-
“Egyetértés” Agricultural Productional and Trading Co-operative (Szakoly)	28	7 385 250	3	58 750
<b>Statistical Subregion of Nagyálló</b>	<b>31</b>	<b>7 943 250</b>	<b>3</b>	<b>58 750</b>

Source: completed from the data of Office for the Ministry of Agriculture and Regional Development of Szabolcs-Szatmár-Bereg county (2002)

Altogether 31 pieces application came in from the “Egyetértés” and “Aranyszablya” Agricultural Productional and Trading Co-operatives and 7,9 million Ft out business share were paid.

### 3.5. Present situation of the agriculture of Statistical Subregion of Nagyálló

In spite of the fact that quality of arable lands is not so good in the economy of the region agriculture sector is dominating. Within agriculture production main branch is plant production. In the region most of the inhabitants, 15,8 thousand people work in agriculture and for many of them it does not mean additional payment but the only source of living.

In 2003 there are 4 operating large farms (Agro Summa Plc., “Aranyszablya” Agricultural Productional and Trading Co-operative, FARM Agricultural Commercial and Service Ltd., “Egyetértés” Agricultural Productional and Service Cooperative) in the region.

Table 6

**Land use of farms in Statistical Subregion of Nagyálló**

Name	Balkány	Geszteréd	Nagyálló	Szakoly
	Agro Summa Rt.	“Aranyszablya” Cooperative	Farm Ltd.	“Egyetértés” Cooperative
Arable land	585	-	-	149
Garden	-	-	-	-
Orchard	1	272	121	-
Vineyard	-	-	-	-
Grass	198	-	-	9
Forest	33	-	-	52
Reeds	23	-	-	17
Fish pond	-	-	-	-
<b>Common area</b>	<b>840</b>	<b>272</b>	<b>121</b>	<b>227</b>
Area out of cultivation	37	-	3	-
<b>Total area</b>	<b>877</b>	<b>272</b>	<b>124</b>	<b>227</b>

Source: own survey (2003)

Table 1

**Content of indices applied and proposed for estimation of economic, ecological and social development of the county**

ECONOMIC	ENVIRONMENTAL ECOLOGICAL	SOCIAL
1. Difference in migration	1. Sewerage installation	1. Density of population
2. Agricultural employment	<i>Environment protectional area</i>	2. Ratio of persons over 60 years
3. Tertiary and quaternary employment	<i>Water pollution sources</i>	3. Number of finished classes in population over 11 years
4. Industrial employment	<i>Air pollution sources</i>	4. Number of built flats
5. Unemployment rate	<i>Wasting management</i>	5. Ratio of flats installed into water network
6. Number of economic organizations	<i>Cleaned area</i>	6. Gas supply
7. “AK” system <sup>1</sup>	<i>Inner city park</i>	7. Car stock
8. Number of tourist nights	<i>Recreation area</i>	8. Number of telephone main stations
9. Personal income		9. Availability conditions
<i>Personal income tax paid in</i>		<i>Surgery hours of General Practitioners</i>
<i>Domestic income</i>		<i>Children enrolled in primary school</i>
<i>Regional development and agricultural subsidies</i>		<i>Children enrolled in secondary school</i>
<i>Commercial provisions</i>		<i>Number of persons enrolled in library</i>
<i>Provisions of host places</i>		<i>Programmes</i>
<i>Special products</i>		<i>Social organizations</i>
		<i>Notable families</i>
		<i>Romany ethnicum</i>

Source: Own research (2003)

Indices used by Central Statistical Office are blamed for not separating economic, environmental-ecological and social functions of regional development. It is practical to differentiate these indices according to economic, ecological and social functions of region and further indexes should be included to get more realistic view of development of a given settlement and region.

My proposed indices are listed in Table 1 and are written by italics.

- I initiated into **economic indices** personal income tax paid-in, domestic income, sum of regional development and agricultural subsidies, commercial provisions, provisions of host places and indices for number of special products typical of settlements.
- I completed sewerage installation index estimating **environmental-ecological situation** with indices for extent of environment protectional area, number of water and air polluting sources, level of wasting management, extent of cleaned area, inner city park and recreation area.

<sup>1</sup> Indicator for land evaluation in Hungary

- I initiated in **social indices** surgery of General Practitioners', number of children enrolled in primary and secondary schools, ratio of persons enrolled in library. Furthermore indices for programmes, social organizations, notable families and ratio of ethnicum in settlements.

Starting order was the complex index number of CSO. Afterwards I classified the 19 indices according to the region's economic, environmental-ecological and social functions and I determined development level of settlements, accordingly economic, ecological and social functions on the arithmetical average of indices. I completed the 19 indices applied by CSO with further indices to get more realistic view of development of settlements. Arithmetical level of serial number of the original and the completed indices gives the new (completed with my proposals) development order of a settlement. Sequence of settlements calculated by different methods are listed in a table which is demonstrated in Table 2.

Table 2

**Development sequence of Statistical Subregion of Nagykálló according to economic, environmental-ecological and social functions**

Name	COMPLEX		ECONOMIC		ENVIRONMENTAL ECOLOGICAL		SOCIAL	
	KSH	OWN	KSH	OWN	KSH	OWN	KSH	OWN
Balkány	1.	5.	3.	2.	3.	7-8.	4.	4.
Biri	8.	6.	6-7.	6.	4.	2-3.	5.	6.
Bököny	4.	7.	8.	8.	4.	5.	6.	5.
Érpatak	2.	8.	6-7.	7.	4.	4.	8.	8.
Geszteréd	6-7.	4.	4.	3-4.	4.	2-3.	7.	7.
Kállósemjén	6-7.	3.	2.	3-4.	4.	6.	2.	2.
Nagykálló	5.	2.	1.	1.	2.	7-8.	1.	1.
Szakoly	3.	1.	5.	5.	1.	1.	3.	3.

Source: own calculation (2003)

According to the *complex index* number applied by CSO the most developed settlement is Balkány which is followed by Érpatak, Szakoly, Bököny, Nagykálló, Geszteréd and Kállósemjén, and Biri.

According to the *complex development situation* which I calculated the most developed settlement is Szakoly which is followed by Nagykálló, Kállósemjén, Geszteréd, Balkány, Biri, Bököny and Érpatak.

### 3.4. Consequences of paid compensation and out business share in Statistical Subregion of Nagykálló

Ownership structure of land has changed in the settlements in 1992 after giving back compensational lands and partial ownership. Capital parts ensuring agricultural production and land ownership separated from each other. In the region large-scaled production stopped, land area broke up, assets and plantations grew old, entrepreneurs changed to reduced cost management.

Table 4

**Area of cultivation branches designated for compensation by farms of Statistical Subregion of Nagykálló and value of compensational tickets coming in the auction**

Name	Arable land ha	Orchard ha	Grass ha	Forest ha	Reeds ha	Area taking out of cultivation ha	Value of compensational tickets Ft
State Farm of Balkány	805	127	6	237	-	-	6 817 000
Szabolcs MGTSZ	535	65	34	93	3	-	6 019 000
Tácsics MGTSZ	482	17	42	18	-	-	3 102 000
Kossuth MGTSZ	179	10	10	4	-	-	681 000
Új Hajnal MGTSZ	1 360	115	100	80	11	-	19 287 000
Új Élet MGTSZ	466	0	122	121	-	6	5 234 000
Nyírség MGTSZ	2 115	27	118	60	81	4	24 078 000
Egyetértés MGTSZ	161	4	5	6	-	-	941 000
<b>Total</b>	<b>6 103</b>	<b>365</b>	<b>437</b>	<b>619</b>	<b>95</b>	<b>10</b>	<b>66 159 000</b>

Source: completed from data of Office for Loss Adjustment of Szabolcs-Szatmár-Bereg County (2002)

The largest area for compensation was designated from arable land, 6.103 ha and from forest, 619 ha. Value of all compensational tickets coming in from the auction was 66.159 th Ft from which Nyírség MGTSZ had the largest amount, 24.078 th Ft.

I could collect data of paying out *business shares* only from “Egyetértés” and “Aranyszablya” Agricultural Productional and Servicing Co-opeartives. Other co-operatives in the Statistical Subregion are on bankruptcy, in liquidtion, or final settlement, thus paying of out business shares of these co-operatives has not done yet.

Table 3

**Volume, price and value indices in examined plant production and animal husbandry<sup>1</sup>**

Name		Plant production	Animal husbandry
Volume index, % <sup>2</sup>	1987	19,64	8,97
	1988	16,48	8,93
	1989	16,81	9,13
Price index, % <sup>2</sup>	1987	420,92	366,43
	1988	435,02	342,29
	1989	360,44	312,37
Value index, %	1987	82,66	32,86
	1988	71,69	30,56
	1989	60,58	28,52

Source: own calculation (2003)

- Production volume produced by significant plant production or animal husbandry branches of large-scaled farms of Statistical Subregion of Nagykálló decreased down to *averagly 82 % in plant production and 91 % in animal husbandry* comparing with the period 1987-1989.
- Production value decrease of farms of Statistical Subregion of Nagykálló was caused by fall of quality of products as price index rose *averagly up to 405 % in plant production and 340 % in animal husbandry* compared to period 1987-1989.
- Value index in Statistical Subregion of Nagykálló showed *averagly 28 % decrease in plant production while averagly 70 % fall in animal husbandry*. Decrease of value index was caused by land loss after change of farms.

Considerable decrease can be noticed in production value. Size of arable land owning or cultivating by the farms declined by 5 %, number of animals fell from 3634 standard animal to 795.

According to the analysis of the past (1987-1989) Szabolcs MGTSZ (Balkány), State Farm of Balkány, and Nyírség MGTSZ (Nagykálló) are in the best farms whereas according to the present situation these are changed successors of Nyírség MGTSZ and “Új Hajnal” Agricultural Productional and Service Cooperative (Érpatak).

<sup>1</sup> Examined year, 2000

<sup>2</sup> Fisher's volume and price index

The sequence initiating my proposed indices differentiated according to regional development functions is the following:

- The most developed settlement **from economic view** is Nagykálló, followed by Balkány, Geszteréd and Kállósemjén, Szakoly, Biri, Érpatak, and Bököny.
- The most developed settlement **from environmental-ecological view** is Szakoly and then Biri and Geszteréd, Érpatak, Bököny, Kállósemjén, Nagykálló and Balkány are the followings.
- The most developed settlement **from social view** is Nagykálló which is followed by Kállósemjén, Szakoly, Balkány, Bököny, Biri, Geszteréd, and Érpatak.

Development level of settlements calculated by using of the proposed economic, environmental-ecological and social indices showed difference from the calculation by differentiated separation of indices applied by CSO. It is showed by dark fields of Table 2. I found the most considerable difference in the sequence of environmental-ecological development of settlements but economic and social development sequence of settlements is different in several points from the sequence calculated by differentiated division of indices initiated by CSO.

### 3.3. Past of farms in Statistical Subregion of Nagykálló

The most considerable large-scaled farms of Statistical Subregion of Nagykálló before change were the followings:

- State Farm of Balkány (Balkány),
- Agricultural Co-operative of Szabolcs (Balkány),
- Agricultural Co-operative of Tánicsics (Biri),
- Agricultural Co-operative of Kossuth (Bököny),
- “Új Hajnal” Agricultural Co-operative (Érpatak),
- “Új Élet” Agricultural Co-operative (Kállósemjén),
- Agricultural Co-operative of Nyírség (Nagykálló),
- “Egyetértés” Agricultural Co-operative (Szakoly).

In 1992 after the change most of the co-operatives remained productional, but in their name - mainly only formally - service and trade were included. After change of the farms 1 joint-stock company, 1 limited liability company and 8 new-type co-operatives have been established.

### 3.3.1. Production structure and profitability of large-scaled farms of Statistical Subregion of Nagyálló

Analyzing agricultural situation of large-scaled farms (seven agricultural co-operatives and one state farm) of Statistical Subregion of Nagyálló before change of the regime (1987-1988-1989) the followings can be concluded.

- Farms owned (used) 1600 - 7600 ha **land territories**. Nyírség Mgtsz (Nagyálló) had the largest land territory. Total land territory of farms is almost permanent from year to year. From cultivation branches determinant were arable land, fruit farm and grass.
- **Work-power supply** changed between 121 - 1014 persons according to the average statistical number and decreased in each farm. The largest work-power was in Nyírség MGTSZ (Nagyálló). 80 % of work-power of farms was manual and 20 % was non-manual. Earlier co-operatives considered employment and social support of their members important duties.
- **Assets** showed great dispersion, assets *in 1987* was 29.580 - 489.580, in 1988 48.500 - 522.677, *in 1989* 51.640 - 527.528 thousand Ft. State Farm of Balkány showed the largest fixed assets.
- While analyzing **results of farming** I stated that income was 3.364 - 63.781 th Ft *in 1987*, 4.485 - 73.535 th Ft *in 1988* and 3.981 - 34.408 th Ft *in 1989*. The most profitable companies were Nyírség MGTSZ (Nagyálló), State Farm of Balkány and Szabolcs MGTSZ (Balkány).
- **Animal husbandry** were not significant in agricultural economy of Statistical Subregion of Nagyálló. The two most important cause of it were low buying-up prices and high production costs. Considerable branches were cattle and sheep.
- When analyzing structure of **plant production** I stated that in sowing structure cereal production was dominant, but potato, sunflower and tobacco were produced on considerable areas. Significant plant cultures were also arable vegetables: pepper, tomato, cabbage, and from fruits apple was dominant.

### 3.3.2. Effectiveness of farms in Statistical Subregion of Nagyálló in 1987-1989

I highlighted the following indices showing effectiveness of the farms of the region:

- **Asset ration profitability** was between 5,19 - 16,23 %. The best values of asset ratio profitability were reached in Szabolcs MGTSZ (Balkány) and in “Egyetértés” MGTSZ (Szakoly).
- **Cost ratio profitability** was between 6,4 - 28,12 % in the examined farms. I found the best value of cost ratio profitability in “Egyetértés” MGTSZ (Szakoly).
- **Cost level** was 73,01 - 93,97 %. The best cost level was in “Egyetértés” MGTSZ (Szakoly) while the worst was in State Farm of Balkány.
- **Income of farms for 1 ha land area** was 1,4 - 14,85 % th Ft/ha. The best value was reached by State Farm of Balkány.
- **Asset supply** was 24,87 - 219,13 th Ft/ha. I experienced the best value in State Farm of Balkány.

Altogether it can be stated that there are considerable differences in each index. The most favourable effectivity indices were in State Farm of Balkány and “Egyetértés “ MGTSZ (Szakoly).

### 3.3.3. Changes in production in the large-scaled farms of Statistical Subregion of Nagyálló

I examined changes of production in the large- scaled farms of Statistical Subregion of Nagyálló. I analyzed changes in volume, price and value of production. I made analysis with indices.

I experienced considerable decrease in the output of farms of Statistical Subregion of Nagyálló both in plant production and in animal husbandry. In farms which' production value has declined significantly are in any phase of liquidation or final settlement or they closed down. After change of the regime several successor organizations have been established but their viability was doubtful at the time of establishment due to lack of means of the production and mainly lack of land. According to the value analysis it could have been seen also in the decrease of the output of production value.

**16. Szabolcs-Szatmár-Bereg megye települési önkormányzatai számára elérhető támogatási lehetőségek.** A ma diákja - a jövő tudósai. Doktoranduszok Országos Szövetségének Találkozója. Budapest, 2000.

**17. A Mikrohitel Program bemutatása, folyósításának rendszere és tapasztalatai.** DE Agrártudományi Közlemények. „Acta Agraria Debreceniensis” Debrecen, 2001. I. sz. 81-87.p. /Társszerző: Molnár Tamás/.

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(31%). None of the decision support systems indicated on the list were recognized.

**My aims are the followings:**

- To systematize domestic and international specialized literature in rural development
- To introduce methods for determining of rural areas, to contribute to the establishment of methodological rural development. In the focus of my research is to answer to a question that 19 indices of complex measure numbers which is used by the Central Statistical Office is enough to estimate development of settlements in the Statistical Subregion of Nagykálló.
- To examine the situation; economic, ecological and social development Statistical Subregion of Nagykálló starting from the region's economic, ecological and social function.
- To analyze situation of the agriculture of Statistical Subregion of Nagykálló before changing of the regime and today.
- To analyze different subsidies granted for the settlements of Statistical Subregion of Nagykálló. To examine how subsidies are in harmonisation with the economic, ecological and social development of the settlements.

