

Economics of agriculture

SI – 2

UDK: 338.48-53:63 STARA PL.

THE ROLE OF MULTIFUNCTIONAL AGRICULTURE IN SUSTAINABLE TOURISM DEVELOPMENT IN THE AREA OF STARA PLANINA¹

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Abstract

The area of Nature Park and tourist region "Stara planina" owes the exceptional natural and cultural values on which base current strategic directions of economic development – tourism and agriculture. A significant ecological sensitivity and demographic and structural limitations of the area, emphasizes an importance of these activities sustainable development, which ensures their mutual support in realizing an integral regional development. The sustainable tourism presumes the development of complementary activities – agriculture, handicrafts and services, by promoting a consumption of local products and services and encouraging the employment of local population in tourism. The sustainable agriculture has multifunctional character and relies on the traditional production methods. The production of high nutrition value food, along with providing services of public interest and developing additional activities, ensures the environment protection and long-term sustainable management with natural resources and contributes to tourism development, employment growth, social cohesion and preservation of tradition and cultural heritage.

Key words: multifunctional agriculture, sustainable tourism, protected area.

1 The paper is a part of the research project No. 149007 "Multifunctional agriculture and rural development in the function of Serbia's accession to the European Union", financed by the Ministry of Science and Technological Development of the Republic of Serbia

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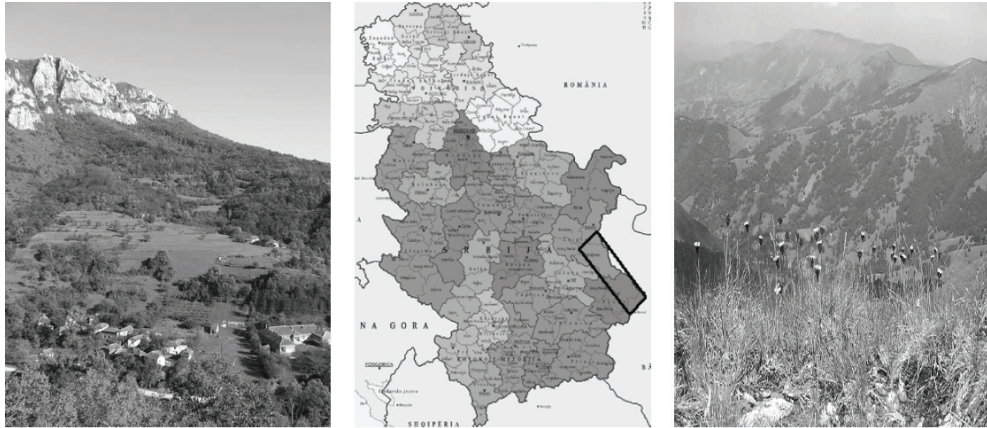
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Introduction

The area of the Nature Park and the tourist region "Stara planina" extends to 1542 km², alongside of Stara planina massif and sub-mountain surrounding, in northwest-southeast direction, ranging over parts of the municipalities of Dimitrovgrad, Pirot and Knjazevac and the city of Zajecar, in border zone with the Republic of Bulgaria, long around 100 km and wide about 4 km in the north, to 30 km, in the south.

Figure 1. Stara planina – mountain rural landscape and geographical position



Sources: <http://www.todimitrovgrad.org.rs/>; <http://commons.wikimedia.org/wiki/File:SerbiaPoliticalDivision.png>.

Generally, sparsely populated, this area of remarkable natural values and tourist potential gravitates to the road route of corridor 10 and its branch Niš – Dimitrovgrad - Sofia (E-75 and E-80), to the railway route of corridor 10 - Belgrade – Niš – Sofia and the Niš airport. Together with accession of Bulgaria into the EU and by decision of Serbian Government on significant investments in road and tourist infrastructure, in last few years has dynamically improved an accessibility and investment attractiveness.

According to the potentials and limitations of development, the Spatial Plan of this area defines **tourism**, **agriculture** and **entrepreneurship** as strategic priorities of economic development ("Official Gazette of RS" 115/2008). High ecological sensitivity and present demographic and structural limitations of the area emphasize the significance of sustainable development of these activities, which ensures their mutual support in realization of integral regional development.

The sustainable tourism establishes a balance of ecological, economic and social component of tourist development in realization of the environment protection, the growth of employment and poverty reduction and it is of utmost importance for protected areas. Stara planina was declared for the nature park in 1997 and was on the preliminary list of the UNESCO biosphere reserve (MAB). *The European Charter for Sustainable Tourism in Protected Areas* includes, among the basic principles of tourism development in these areas, the following key issue - "increase of benefits from tourism

to the local economy, by: promoting the purchase of local products (food, crafts, local services) by visitors and local tourism businesses, and encouraging the employment of local people in tourism" (www.european-charter.org).

In accordance to the Master Plan of "Stara planina" tourist destination, the development of tourism bases on creation of ski mega resort at the mountain, but also on creation of complete tourist values chain of wider space of Stara planina destination, including the tourism based on nature, culture and rural tourism (MERR, 2007: 73).

The multifunctional model of sustainable agriculture development, which keeps and improves the natural resources and biodiversity and develops production and processing of high quality traditional local products, rural tourism and handicrafts, provide strong support for sustainable tourism development. The sustainable agriculture in ecologically sensitive areas relies on the traditional methods of production, which ensures high level of ecological rationality, based on the use of local natural resources and knowledge, which carries over from generation to generation (Altieri, 2002). These production methods represent an excellent base for organizing an integral and organic production of food. Protected geographical indications and regional branding and promotion of the local products and services enable promotion of the area too, which contributes to entrepreneurship development, increase of employment and regional development (Popović et.al, 2009: 57).

The potentials and limitations for development of agriculture and complementary activities

Agricultural land

Natural pastures and meadows occupy 2/3 of utilised agricultural land and range over the mountain steppe, lengthwise of around 70 km and in width of 8,5-19 km. Although jeopardized by the processes of biological degradation, owing to insufficient utilisation, they dispose with extraordinary ecological and landscape values and economic potential for development of pastoral livestock breeding and production of milk, meat and manufactured products of special quality, resulted in specific geographical features. The most quality land is under vineyards (1,5%) and orchards (2%), in arable valleys, while sparse, but good quality arable land occupy 28%. Small and fragmented family holdings and slow process of restructuring and privatization of huge land areas in public ownership (44%), along with mountain relief and climate, represent major limitations for productive utilisation of agricultural land⁵ (Nikolić, 2008: 48-49).

Population and husbandries

The mountain villages have been affected by strong depopulation and decrease of husbandries number has not been followed by the property enlargement. High rate of activity has been a consequence of inadequate economic, age and educational structure of population on husbandries (table 1).

⁵ The average area of agricultural land parcel is 24,8 a, out of which: arable land 17,7, gardens 2, orchards 6,2, vineyards 9,8, meadows 24,5, and pastures 48 a.

Table 1. Population and husbandries – basic indicators

| | Old M. area – total - | Out of that | | |
|--|-----------------------------|-------------|----------|-------|
| | | Urban | Mountain | Other |
| <i>Agricultural population in total, %</i> | 2,4 | 0,8 | 15,0 | 4,8 |
| <i>Households with agricultural sources of income, %</i> | 1,9 | 0,4 | 10,4 | 2,8 |
| <i>Husbandries in total households number, %</i> | 31,3 | 22,3 | 66,3 | 64,7 |
| <i>Number of husbandries 2002/1991, %</i> | -20,5 | -10,3 | -31,3 | -29,4 |
| <i>Average size of arable land property, ha</i> | 1,16 | 0,83 | 1,53 | 1,70 |
| <i>Active in total agricultural population, %</i> | 75,9 | 49,1 | 87,0 | 75,7 |
| <i>Individual agricultural producers in population on husbandries, %</i> | 95,6 | 80,0 | 97,6 | 93,5 |
| <i>Number of active agricultural producers per 100 ha of UAA</i> | 12,6 | 3,2 | 24,6 | 9,8 |

Source: SORS, Census, 2002.

The owners of husbandries do not realize incomes from agriculture, i.e. in most of cases, they do not even live on husbandry, which implies to a need of diversifying rural activities, in order to return young people to inherited, but abandoned properties and renew the agricultural production by assets earned in additional activities. There is expected that the development of tourism and complementary activities provides staying, return and permanent settlement of younger working population, at least when we talk about rural settlement with tourist functions (Official Gazette of RS, 115/2008).

Livestock and mechanization

The number and structure of livestock is far below the potentials of local feed production base, as well as regarding agro-ecological minimal norms for preservation of natural grassland, and points out to great possibilities of revival and development of mountain pasture livestock breeding (table 2).

Table 2. Livestock – basic indicators

| | Old M. Area -totally- | Out of that* | | |
|---|-----------------------------|--------------|----------|-------|
| | | Urban | Mountain | Other |
| <i>Number of livestock units per 100 ha of utilised agricultural area</i> | 7,2 | 54,3 | 5,6 | 9,0 |
| <i>Number of livestock units per 100 ha of utilised arable area</i> | | | | |
| - totally | 13,2 | 54,3 | 11,1 | 13,0 |
| - family farms | 56,1 | 21,7 | 94,0 | 55,5 |

* The place of living/census does not necessary overlaps with the location of husbandry
Source: SORS, Census, 2002.

The level of mechanization equipment is low, especially in mountain area. One duo-axial tractor cultivates approximately 22 ha of arable land, but along with extremely expressed spatial heterogeneity, so some mountain villages are completely deprived from power machines (SORS, Census 2002). In regard to heterogeneity of natural conditions is necessary a selective approach to the condition improvement in that field, with accentuation on modernization of livestock production by machines for feed transport and storage, as well as for milking and milk storage.

Infrastructure and investments

Poor technical and technological performances of husbandry are accompanied by low infrastructure and public services equipment level, especially in mountain villages. There is expected significant improvement in these fields by realization of planned tourist projects. In 2008, the investments (legal entities) in agriculture, hunting, forestry and fishery were absent in the municipalities of Pirot and Dimitrovgrad, while in the city of Zajecar were amounted 35,9 million RSD (84,7 thousand RSD per employee in agriculture⁶), and in Knjazevac municipality 10,3 million RSD (30,5 thousand RSD/employee)⁷.

The future development of agriculture and complementary activities

The agriculture and processing of agricultural products

The research done in 2007/08 for the needs of making the Spatial Plan of the Nature Park and tourist region "Stara planina", have shown that in this area can successfully produce many high quality agricultural products in the systems of traditional, integral and organic production (*sheep breeding – figure2*).



Source: <http://www.topirot.com/>



Processing these products (*like well-known Pirot caciocavallo, on figure 3*) and adequate protection and branding enrich area tourist supply and contribute to its recognition. These activities develop in the following micro-regions, depending on heterogeneous natural, resource, technical-organizational and social-economical conditions (Nikolić, 2008a: 19-21):

Source: <http://www.topirot.com/>

6 Those employed in agriculture, forestry, fishery and water management (companies and co-operatives) in 2008 (SORS, 2009).

7 In the same year, in municipality of Cajetina was invested 208,6 million RSD (1,2 million RSD/employee). On the territory of the Republic of Serbia was directed 21,4 billion RSD (431,2 thousand RSD/employee), out of which in Central Serbia 5,1 billion RSD (244,5 thousand RSD/employee) (SORS, 2009).

1. Timok fruit - viticulture region – it ranges over relatively densely populated zone of Zajecar-Knjazevac valleys and uplands and comprises 23% of the area's agricultural land, over 40% of arable land, 48% of vineyards and half of land under the orchards. The participation of household with husbandry is low; there dominate small holdings with non-agricultural sources of income.

The production should be oriented toward lesser number of bigger cattle and sheep cooperative farms in ownership of associated small farmers, directed to controlled use of mountain permanent grassland, which gravitates toward Timok, for livestock breeding and organized cooperative processing and placement of branded meat and dairy products. In parallel with that, the conveniences for integral growing of fruit and vegetables should be used. The area of Knjazevac is a part of south sub-region of Timok vineyard region and it is famous by top red wines, which geographic origin should be protected and the production of vine revitalized, together with development of wine tourism;

2. Pirot viticultural - fruit region – it occupies only 11% of agricultural land, but there are 22% of orchards and 48% of vineyards of the area. It is characterized by fragmented holdings, undeveloped livestock breeding and high participation of non-private ownership of land.

The preferential directions of investments refer to renewal of vineyards and wine production in this region, which belong to Nisava-South Morava viticulture region and has long tradition of quality white and red wines' production, with great potentials for development of wine tourism. The revitalization of traditional production of Pirot caciocavallo suggests the need for building lesser number of big sheep farms, supported by use of pastures which gravitate toward Pirot, and adequate processing capacities (mini slaughter-houses for lambs, mini dairies...). Small husbandries should be supported to orientate toward small production programs (autochthonous sorts of fruit, vegetables, honey, fish, etc.), production associations building and founding SMEs for collection, preparation, storage and distribution of these products and product preparations.

3. Knjazevac polymorphic region – encompasses northwest slopes of Stara planina and it is characteristic by heterogeneous production structure (11% of arable land, 3% vineyards and 7% of orchards, 7% of meadows and 7% of pastures), numerous small husbandries and traditional production methods.

Owing to the vicinity and partial stretch within the park's protecting zone, this area is especially favourable for development of organic production of autochthonous fruit sorts, rare sorts of grain and medicinal herbs and their placement under the trade mark of Stara planina Nature Park. Good results can be achieved also in development of traditional mixed livestock breeding, with dairy cattle as a leading branch and organized in common mountain grazing.

4. Grazing region – it comprises 71% of meadows, 72% of pastures, 30% of arable land and 21% of orchards of the area and ranges over mountain terrains of the municipalities of Dimitrovgrad, Pirot and Knjazevac, over 800 m above sea level. The basic limitation for sustainable use of these potentials is depopulation, which

alleviation is expected with development of the tourist resort.

In the field of agriculture the priorities are linked to a renewal of livestock grazing and strengthening of the organic production and protection of origin, especially sheep meat and milk and their preparations, in connection with processing capacities in city centres, where some villages, i.e. pasture series, traditionally gravitate to. The preservation of population density, sustainable use of agricultural land in mountain area with limited production capabilities and respecting the park's protected zones, mostly present within this region, should be compensated to multifunctional husbandries with adequate budgetary subsidies.

Rural tourism and old handicrafts revival

The traditional gastronomy, in distinctive, natural, cultural-historical and ethno-architectural environment, strengthens the development of catering industry, tourism and handicrafts. The multifunctional husbandries have real possibilities for development of entrepreneurship and/or realization of incomes in these activities, as additional activities on the husbandry and/or in rural surrounding.

The spatial plan of the area anticipates tourism development in, so called, tourist villages and villages in function of tourism. In tourist villages - traditional settlements, which development will dominantly lie upon tourism, was anticipated 9600 beds and engagement of 1450 employees in tourism⁸. In villages in function of tourism, as significant complementary activities (rural, agro-, hunting and ethno-tourism)⁹, was anticipated 3700 beds and 466 employees. The settlements: Temska, Topli Do and Visočka Ržana-Dojkinci in the municipality of Pirot; Kalna and Crni Vrh (municipality of Knjaževac); and Izatovci and Senokos (municipality of Dimitrovgrad) were anticipated for development of complementary activities - tourism and the local agricultural products concentration for organized supply of tourist resort and tourist centres and settlements in Stara Planina (Official Gazette of RS, 115/2008).

Besides wide supply of traditional specialities and local wines, activating old handicrafts should contribute to more complete tourist supply: kilim weaving – which originates from XVI century (famous Pirot kilims with autochthonous motifs and weaving techniques with the wool from Stara planina sheeps), traditional pottery (especially present in the middle of XIX century, also in Pirot) and making jewelry

8 Crni Vrh with hamlets Gravaljosa, Čuštica and Topli Do in wider surroundings of tourist resort, then Balta Berilovac and Vrtovac/Inovo (municipality of Knjaževac), Gostuša, Dojkinci, Jelovica, Rosomač and Visočka Ržana (municipality of Pirot) and Senokos and Kamenica, (municipality of Dimitrovgrad), with totally 3550 residents.

9 In villages near ski centers: Gornja Kamenica, Janja etc. (municipality of Knjaževac), Rsovc, Brlog, Bela etc. (municipality of Pirot) and Izatovci, Bračevci etc. (municipality of Dimitrovgrad); and out of the ski centers, in villages: Selačka and Mali Izvor (city of Zaječar), Cerova, Mirkovci etc. (municipality of Pirot), Baljevdol, Gornji Krivodol, Donji Krivodol etc. (municipality of Dimitrovgrad) and Ravno Buče, Radičevac, Novo Korito etc. (municipality of Knjaževac).

(silversmiths), which had been developed from Middle Age to the beginning of the XX century, then embroidery, etc. There should also add ethno architecture and ethno manifestations, where promotes rich spiritual inheritance of this region – music, food, folklore, customs ("Molitva pod Midžorom", "Sabor na Kadibogazu", "Sabor na Panadžur"...).

Figure 4. Old handicrafts and ethno-architecture of Pirot area



Source: <http://www.topirot.com/>

Financial support and cross-border cooperation

The financial support to development of multifunctional agriculture and sustainable tourism, except in authorized ministries, local communities can find in IPA supporting program to cross-border cooperation with Bulgaria.¹⁰ Serbia has numerous mutual interests and possibilities to cooperate with, in Stara planina region. Certain results were achieved within Euroregion "Danube 21" and "Eurobalkans", as well as within the SDC cross-border project "West Stara planina" (Jelinčić, Đurović, 2009: 63-64).

GTZ-KWD and MAFWM support activities of woman organizations for ethno inheritance preservation, in the frame of project "Ethno-inheritance of Eastern Serbia"¹¹

The preservation of globally important eco-system of Stara planina area is one of the project goals for Reforming Serbian agriculture in transition World Bank and GEF STAR Project.¹²

A condition for efficient use of these assets is organized cooperation at the local level. The associations of producers, clusters and local action groups have a decisive role in it (Popović et.al, 2007: 818-821, Tomić et al., 2009: 8).

10 The fund IPA CBC of the program Bulgaria-Serbia for period 2008-2011 amounts around 9.369 thousand EUR (MIPD RS, 2009/2011: 36); the first public call for project proposals was closed on 30.11.2009, while the other is expected to be at the end of 2010, <http://www.ipacbc-bgrs.eu/scc/news/view/22>.

11 <http://www.raris.org/vesti2010/07-31-10.htm>.

12 The bid of the MAFWM for submitting the preliminary designs for the projects, which are going to be financed through the Competitive Grants Scheme (CGS) within the STAR project, was ended on 13.06.2010, and deadline for finishing the selected projects is October 2011, www.minpolj.gov.rs.

Conclusion

Taking into consideration the available natural resources and cultural heritage of the Nature Park and tourist region "Stara planina", the multifunctional agriculture can give significant contribution to sustainable tourism, as basic developmental priority of this area. The inevitable precondition for successful realization of such developmental orientation is going to be realized partnership of wide circle of stakeholders at the local community level, coordination with appropriate actors at the regional and national level and active international cooperation, especially cross-border, with Bulgaria.

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