

Duško Jaćimović<sup>1</sup>, Zoran Rakićević<sup>2</sup>, Jasmina Omerbegović-Bijelović<sup>3</sup>

<sup>1</sup> The Ministry of Finance, the Treasury, Republic of Serbia

<sup>2,3</sup> University of Belgrade, Faculty of Organisational Sciences

# Required and Realized Support to Serbian Agricultural Farms at the Beginning of the XXI Century

UDC: 631.1(497.11),,20" ; 338.43.02(497.11),,20"

DOI: 10.7595/management.fon.2014.0011

SPIN' 13, Belgrade, 05-06. November 2013.

The paper focuses on the research of support provided to agricultural farms (AF) in Serbia, which are, in this paper, considered as SMEs. The basic idea of this paper is to analyze the support that is necessary to be provided to the existing AF in modern Serbia, with the aim of improving the level of quality in managing their business. The intention of the authors is to: 1. Explore Afs' expectations from support; 2. Determine the level of these expectations achievement; and 3. Determine the critical areas where support is not at an adequate level, all with the aim of successful (effective and efficient) planning of support to AFs. The results of this study are intended for AFs, the state and its institutions that provide support to AFs and other stakeholders.

**Keywords:** Agricultural farms (AFs), Small and medium enterprises (SMEs), Support for AFs.

## 1. Introduction

Agriculture represents an important branch of the economy of the Republic of Serbia (RS). The following facts can confirm that claim (Statistical Office of the RS): a) Over 57% of the total territory of the Republic of Serbia belongs in the category of "Agricultural land"; b) Agricultural households and farms are the main habitat for 43.64% of the RS's population and the main work environment for 21% of the citizens capable of working (among all economy branches, agriculture is the one that employs the largest part of the population) and they contribute to gross national product of the RS their share being 12.3% in it.

Agriculture farms (AFs) represent the basic form of organizing economic individuals in agriculture. The main task in stimulating the agriculture sector is accomplished by supporting AFs. In order to give an adequate support, it is necessary to record the requirements of AFs for support and, according to that, define types and actions of support for the SME sector.

## 2. Serbian agricultural farms

An agricultural farm is a productive unit on which an economic society, a collective farm, an institution or other legal entity, entrepreneur or farmer performs agricultural production. There are different ways to classify AFs and one of them is a classification according to registration. According to this criterion, there are two main types of AFs: a) Registered agricultural farms (RAFs) – agricultural farms which are registered in the Business registers agency and in the Agricultural farms registry in the Treasury of the Ministry of Finance; b) Unregistered agricultural farms (UAFs) – agricultural farms that are not part of the registration system. By registration, an AF gains the right to get incentives for agricultural production (refunds, subventions, bonuses, credits, etc.), which, at the proposal of the Ministry of Agriculture, Trade, Forestry and Water Management, is enforced by the Governmental decrees of the Republic of Serbia (through decrees).

Agricultural farms can be classified by their size and the level of development, according to the following characteristics (Jaćimović, 2013):

- **the level of mechanization** – a parameter by which the characteristic “mechanization, tools, attachable units, automatization and standardization of the production process” on the observed AF are assessed;
- **the size of the arable area** – a parameter by which is measured the size of the area on which the agricultural production of the observed AF is done is measured;
- **human resources** – the labour of the observed AF; this characteristic represents the number of workers engaged on an AF.

According to these characteristics, family AFs can be classified into the following categories: micro, small and medium agricultural farms and they belong to the following type of enterprise –the category of “small and medium enterprises” (SMEs).

In view of SMEs, they are recognized as the enhancers of the national economy development, as the greatest potential of (self)employment and a generator of new jobs, and also as enterprises which have a great influence on national, regional and local development of the surroundings in which they are located (as a “tool” for stopping the migration of people from economically undeveloped areas) and which are increasingly taking on the character of international enterprises (taking into account the fact that they operate on the global market). The SMEs, according to the current reputation, represent the key source of the national economies’ growth (Spicer&Sadler-Smith, 2006, p. 134).

By virtue of the following facts, we can say that Serbian AFs require strong support from the community: a) There are 452,606 registered AFs in Serbia (according to the information from the Treasury of the Ministry of Finance, there are 778,000 AFs altogether in Serbia); b) The average age of the agricultural machines is about 12 years (Gulan, 2008); c) Unfavourable educational structure of the rural labour and poor knowledge (97% of the rural population did not attend additional educational courses); d) Human resources in AFs do not have enough additional skills (54% of the rural population do not have particular knowledge and skills, according to Living Standard Measurement Study, 2007).

### 3. Support to Serbian agricultural farms

All types of formal and informal financial and non-financial support (from individuals, enterprises, institutions, state, or suprasystems), are considered to be the support to SMEs and AFs (Rakićević et al., 2012). Chrisman and McMullan (2004) showed that small enterprises that use services of the public agencies as support have a higher rate of existence and a higher growth in comparison with the companies that do not use this kind of service. Therefore, we can say that support has its significance and that, accordingly, the help to the SME sector can be more successful by upgrading the community’s support.

An essential factor of influence on SMEs (and, within it, on AFs), which is of great importance from the point of view of the support that is analyzed in this paper, are the SME’s surroundings. Business environment represents the business potential, namely, the refund of SMEs (Lazić-Rašović & Omerbegović-Bijelović, 2006), and, according to Porter, “the root of enterprises’ competitiveness is precisely in the nature of the surroundings in which they operate“. The business surroundings’ participants of SME are its stakeholders: buyers, suppliers, competitors, investors and banks, educational and research institutions, state and its institutions, local community, ecologically oriented and other similar organizations, media, organizations and agencies which provide support to the SME sector (Omerbegović-Bijelović, 2006, p. 5). SMEs can gain a great benefit of and get support and help from all stakeholders from the surroundings (regardless of whether this help is money or other material resources, knowledge, information, etc.). As a rule, every stakeholder has an interest to follow (mainly to help and support) existence/development of a concrete SME. The support to agricultural farms can be done via their stakeholders: state (its ministries and agencies for rural development, industry, agriculture, tourism, education, traffic, infrastructure, economics, etc.), collective farms and associations, local rural communities and international organizations and enterprises that do their business in the branch of agriculture.

Table 1: Some of the realized programs of support to agricultural farms

Institution	Support program to AF
<b>National Agency for Regional Development</b>	1. Information and advices about a possibility to use agricultural credits and incentives.
<b>Ministry of Economics and Regional Development</b>	2. Improving the quality of tourist offer for 2012. 3. (Credits for AFs and entrepreneurs.)
<b>Regional Agency for Socio-economic Development „Banat“</b>	4. Establishing and equipping regional agency for supporting the development of fruit and vegetable production; 5. Agri-eco industrial park – North Banat; 6. Intermunicipal agricultural work zone; 7. Sample fields for supporting the development of fruit and vegetable growing – Kikinda.
<b>Center for the Development of Jablanica and Pčinja Districts</b>	8. The development of consortium and associations of agricultural producers in Jablanica and Pčinja districts.
<b>Regional Development Agency “SOUTH“</b>	9. Arrangement of agricultural soil via land consolidation and building irrigation systems; 10. Support to the viniculture development through the resumption of wine-growing hills in Niš; 11. Support to the fruit growing development in the Niš region; 12. Support to the livestock farming development – Svrlijig, Gadžin Han.
<b>Regional Development Agency „Zlatibor“</b>	13. The increase in competition between small and medium enterprises that are active in producing and processing raspberry in West Serbia; 14. The improvement of agricultural production by applying scientifically based approach to doing agriculture; 15. Upgrading the productivity and quality of fruit production in the Zlatibor district.
<b>Regional Development Agency „Srem“</b>	16. Contribution to better protection of the environment and creating conditions for producing more quality food and agricultural products.

Table 1 presents the review of some support programmes designed for Serbian agricultural farms at the beginning of the XXI century. These types of support programs are usually realized through regional development agencies (“regional centers for the development of SME and entrepreneurship“, as they were called).

#### 4. The research of Serbian agricultural farms’ requirements for surroundings’ support

The research on which this paper focuses on was done during 2012; the record of the conditions was gotten by taking a sample from agricultural farms (AFs) from the territories of the following municipalities: Pančevo, Smederevo and Čačak (Jaćimović, 2013). In these municipalities 72 AFs were polled and there were three different categories within these 72 AFs (they were classified according to their activity: crop farming; fruit and vegetable growing; livestock farming). In the observed sample there is an equal number of all types of agricultural farms (classified by their activity).

The poll consisted of questions about the expected types of support where AFs were expected to express their opinion. Types of support (Table 2) were classified into seven categories: I) Fair economic conditions for agricultural farms to do their business; II) Subventions for agricultural activities; III) Help for the rural infrastructure development; IV) Protection from natural disasters protection; V) Help for the development of villages; VI) Help for agricultural farms’ activities; VII) More convenient gaining and exercise of the rights of registered agricultural farms. Besides that, each AF was also to answer the question about whether previously expected types of support (from the above mentioned seven categories) were realized or not. Table 2 shows the detailed report of information obtained from the poll.

Table 2: Expected and realized support to AFs in Serbia at the beginning of 21st century

N°	Required support	Expected	Realized	Difference	Rank
(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6)
<b>I</b>	<b>Fair economic conditions for AFs' business</b>	<b>89.10%</b>	<b>28.20%</b>	<b>60.90%</b>	<b>III</b>
1	Well-timed information about agricultural businesses' conditions	100 %	56.8 %	43.20%	35
2	Higher prices of agricultural products	88.6 %	20.5 %	68.10%	21
3	More favourable credits for agriculture	95.5 %	43.2 %	52.30%	32
4	Guaranteed purchase price	68.2 %	2.3 %	65.90%	22
5	Tax relief ( <i>the refund of VAT for buying modern mechanization, etc.</i> )	93.2 %	18.2 %	75.00%	14
<b>II</b>	<b>Subventions for agricultural activities</b>	<b>84.09%</b>	<b>20.79%</b>	<b>63.30%</b>	<b>II</b>
6	Higher subventions for seeding	88.6 %	11.4 %	77.20%	12
7	Higher subventions for mechanization	97.7 %	15.9 %	81.80%	7
8	Higher subventions for fuel	95.5 %	75 %	20.50%	47
9	Higher subventions for fertilizing	81.8 %	13.6 %	68.20%	18
10	Higher subventions for plant protection	70.5 %	2.3 %	68.20%	19
11	Higher subventions for irrigation systems	72.7 %	9.1 %	63.60%	26
12	Higher subventions for insurance	81.8 %	18.2 %	63.60%	27
<b>III</b>	<b>Help for the rural infrastructure development</b>	<b>53.72%</b>	<b>14.05%</b>	<b>39.67%</b>	<b>V</b>
13	Embankment and flood protection	0 %	0 %	0.00%	53
14	Rural transport infrastructure development	77.3 %	43.2 %	34.10%	40
15	More traffic stations	6.8 %	0 %	6.80%	52
16	The development of PO/cable network in villages	18.2 %	2.3 %	15.90%	50
17	Electricity supply system	43.2 %	6.8%	36.40%	38
18	The improvement of water supply system	72.7 %	22.7 %	50.00%	33
19	The improvement of fire prevention	36.4 %	6.8 %	29.60%	45
20	The improvement of sewer network	88.6 %	2.3 %	86.30%	5
21	The improvement of gas network	50 %	4.5 %	45.50%	34
22	The improvement of waste disposal methods	100%	34.1 %	65.90%	23
23	More efficient snow removal	97.7 %	31.8 %	65.90%	24
<b>IV</b>	<b>Protection from natural disasters</b>	<b>40.15%</b>	<b>2.65%</b>	<b>37.50%</b>	<b>VI</b>
24	The improvement of anti-hail protection	88.6 %	0 %	88.60%	3
25	Preventing floods in/around villages	0 %	0 %	0.00%	54
26	Preventing drought in/around villages	65.9 %	0 %	65.90%	25
27	Reduction of earthquake consequences	0 %	0 %	0.00%	55
28	Reduction of strong wind consequences	27.3 %	0 %	27.30%	46
29	The improvement of protection from insects invasion	59.1 %	15.9 %	43.20%	36
<b>V</b>	<b>Help for the villages development</b>	<b>76.05%</b>	<b>7.33%</b>	<b>68.72%</b>	<b>I</b>
30	Education development in villages	81.8 %	4.5 %	77.30%	11
31	Health service development in villages	95.5 %	4.5 %	91.00%	2
32	Culture development in villages	84.1 %	27.3 %	56.80%	29
33	Trade (and export) development in villages	95.5 %	13.6 %	81.90%	6
34	Industry development in villages	43.2 %	4.5 %	38.70%	37
35	The development of villages' level of organization	61.4 %	2.3 %	59.10%	28
36	Crafts development in villages	88.6 %	9.1 %	79.50%	10
37	Tourism development in villages	52.3 %	0 %	52.30%	31
38	Sport development in villages	93.2 %	13.6 %	79.60%	9
39	Ecological development of villages ( <i>controlling waste, organic agriculture, renewable energy resources, etc.</i> )	79.5 %	2.3 %	77.20%	13
40	Media development in villages	38.6 %	6.8 %	31.80%	42
41	Taking care of young people (retaining them in villages)	95.5 %	0 %	95.50%	1
42	Taking care of old people	79.5 %	6.8 %	72.70%	15

N°	Required support	Expected	Realized	Difference	Rank
(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6)
<b>VI</b>	<b>Help for AFs activities</b>	<b>67.71%</b>	<b>13.87%</b>	<b>53.84%</b>	<b>IV</b>
43	Organization of farmers	88.6 %	15.9 %	72.70%	16
44	The improvement of help in harvest gathering	68.2 %	13.6 %	54.60%	30
45	Favourable storage of gathered harvest	54.5 %	20.5 %	34.00%	41
46	More help in transport of agricultural products	20.9 %	4.5 %	16.40%	49
47	The improvement of organization of purchase	90.9 %	20.5 %	70.40%	17
48	Constant advisory support for AFs	81.8 %	47.5 %	34.30%	39
49	Jobs for inmates	34.1 %	2.3 %	31.80%	43
50	Higher pension income	81.8 %	0 %	81.80%	8
51	Rights guaranteed by the Labor law	88.6 %	0 %	88.60%	4
<b>VII</b>	<b>More convenient gaining and using the rights of RAF</b>	<b>97.75%</b>	<b>64.78%</b>	<b>32.98%</b>	<b>VII</b>
52	Simple registration of AFs	100 %	31.8 %	68.20%	20
53	Low-cost registration of AFs	100 %	68.2 %	31.80%	44
54	Simple and low-cost re-registration	95.5 %	77.3 %	18.20%	48
55	Compliance with the re-registration procedure	95.5 %	81.8 %	13.70%	51

The results of the poll research, presented in Table 2, indicate that there is a high level of expectations directed by AFs to the following categories: I) Fair economic conditions for agricultural farms to do their business (and, within that, especially timely information about the conditions for agricultural business, tax relief, more favourable credits for agriculture, higher prices of agricultural produce); II) Subventions for agricultural activities (higher subventions for mechanization, fuel, seeding, insurance); III) Help for the rural infrastructure development (improving waste disposal, more efficient snow removal, the development of highway construction and maintenance industry in rural areas, the improvement of sewer network); IV) Natural disasters' protection (Improvement of anti-hail protection, prevention of drought in villages); V) Help for the development of villages ( the development of education, health service, culture, trade, crafts and sport in villages); VI) Help for agricultural farms' activities (organizing farms, improvement in the organization of purchase, rights gained on the grounds of work); VII) More convenient gaining and exercise of the rights of registered agricultural farms (simple process of registering AFs, low-cost registration).

Results (in Table 2) show the low percentage of realization of the expected types of support (column 4 – "Realized"). The analysis of deviation between the realized and the expected values can be seen in column 5 ("Difference"). These results indicate that support is not at an adequate (expected) level yet, and that it is necessary to put in more efforts into achieving the expected values. Higher ranked fields in column 6 are a priority when talking about support (for example: Taking care of young people (retain them in villages), Health service development in villages, improvement of anti-hail protection, Rights gained on the grounds of work, The improvement of sewer network, Trade (and export) development in villages, Higher subventions for mechanization).

## Conclusion

The paper presents a research into the support to agricultural farms in Serbia. The research indicates that AFs in Serbia have higher expectations from the state, its institutions and organizations about the support which should improve their growth and development. Agricultural farms' support expectations were researched, results are presented and, according to the difference between them, areas that have a priority in getting support are identified. This support, concerted with the agricultural farms' demands, would help improving the quality of AFs' operations, as well as growth and development of agriculture as one of the strategic branches of the Serbian economy.

Further research on this topic will be evidenced by measuring the effect of the support provided to AFs, with the aim of presenting those results to the organizations which provide support, in order to make national AFs achieve the standards of AFs from the most developed countries in the world.

## REFERENCES

- [1] Chrisman, J. J. & McMullan, E. W. (2004). Outsider assistance as a knowledge resource for new venture survival. *Journal of Small Business Management*, 42(3), 229-244.
- [2] Gulan, B. (2008). The possibilities of demographic development of Serbian villages. (in Serbian: Mogućnosti demografskog razvoja sela Srbije, *The Agro-business* (magazine), accessed at: <http://www.agropress.org.rs/tekstovi/10097.html> (19.10.2013)
- [3] Jaćimović, D. (2013). Planning of rural households' transition into registered farms (in Serbian: Planiranje prevođenja seoskih domaćinstava u savremena poljoprivredna gazdinstva) - master thesis (the mentor: Jasmina Omerbegović-Bijelović, Ph.D.), Faculty of Organisational Sciences, Belgrade.
- [4] Lazić-Rašović, G. & Omerbegović-Bijelović, J. (2006). The connections of SME and its environment as a business resource. Conference proceedings of XX International symposium - SymOrg "Management and organizational changes – Challenges of European Integration", Faculty of Organisational Sciences, Zlatibor.
- [5] Omerbegović-Bijelović, J. (2006). Planning and preparation of Production and Servicing. University of Belgrade, Faculty of Organizational Sciences.
- [6] Porter, M. (1990). *The Competitive Advantage of Nations*, the Macmillan.
- [7] Rakićević, Z., Omerbegović-Bijelović, J., Lazić-Rašović, G. (2012). Improvement of SMEs environmental support planning based on new structure of support determination, Conference proceedings of XIII International symposium - SymOrg 2012 „Innovative Management and Business Performance“. 634-642, Zlatibor, June 5-6.
- [8] Statistical Office of the Republic of Serbia - ("Demography statistics in the Republic of Serbia, 2011", „Statistical Yearbook of the Republic of Serbia - Population, 2012“, „Labour Force Survey, 2012“, „Living Standard Measurement Study, Serbia“, 2007), downloaded from: <http://webzrs.stat.gov.rs/Web-Site/Default.aspx> (12.10.2013)
- [9] Spicer, D. & Sadler-Smith, E. (2006). Organizational Learning in Smaller Manufacturing Firms. *International Small Business Journal*, 24(2), 133-158.

*Received:* December 2013.

*Accepted:* June 2014.

## About the Author

**Duško Jaćimović**

Ministry of Finance, the Treasury, Republic of Serbia,  
jacimovic.dusko@gmail.com



Duško Jaćimović, M.Sc., works at the Treasury of the Ministry of Finance, RS. He completed his master studies at the Faculty of Organizational Sciences (FOS): Planning of rural households' translation into registered farms (in 2013). His main interests are: the development and promotion of agricultural farms (AFs), small and medium enterprises (SMEs), and particularly observing AFs as SMEs and their support. He was an executive of a small enterprise and he is himself engaged in work in agriculture.

**Zoran Rakićević**

University of Belgrade, Faculty of Organisational Sciences  
zoran.rakicevic@fon.bg.ac.rs



Zoran Rakićević, M.Sc., works as a teaching assistant at the Faculty of Organizational Sciences (FOS), Department for Operations management (Chair of Production and Service Management). He did two master studies: Entrepreneurship and management of SMEs (in 2012) and Operational Research and Computational Statistics (in 2013), and is currently enrolled in PhD studies at the FOS. His research and teaching area of interest includes Entrepreneurship and management of SMEs, Planning of Production and Servicing and Operations management.

**Jasmina Omerbegović-Bijelović,**

University of Belgrade, Faculty of Organisational Sciences  
omeja@fonbg.ac.rs



Jasmina Omerbegović-Bijelović, Ph.D., is full time professor and Head of Chair of Production and Service Management (Department for Operations Management, Faculty of Organizational Sciences, University of Belgrade). Her main areas of interest are: Planning (of production, services and new business venture), Entrepreneurship and Management of small and medium enterprises, Resource management, Servicing management, Tools for Quality improvement and Problem solving. She is an author of the Metamanagement and Metacybernetic system concepts and has published numerous papers in the fields mentioned above.