



Research, innovation and knowledge transfer in the Republic of Serbia

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Research environment

Legal Framework & Strategic Documents

- Law on Scientific Research Activity (Official Gazette RS, No 110/2005, 50/2006-corr., 18/2010, and 112/2015)
- Law on Innovation Activity (Official Gazette RS, No 110/2005, 18/2010 and 55/2013)
- Law on Serbian Academy of Science and Arts (Official Gazette RS, No 18/2010)
- Science and Technology Development Strategy of the Republic of Serbia for the Period 2016 - 2020 - Research for Innovation
- The new Strategy for the period 2020-2027 is still in preparation
- Smart Specialization Strategy Serbia (4S)



Financial capacity for research

Table 1. The general expenditure for R&D (GERD) in the last five years in relation to the GDP

	2014	2015	2016	2017	2018
GDP REVISED	3908469.6	4043467.8	4200197.1	4464629.0	5068588.5
GERD	30084.39	34990.57	37956.28	41531.05	46615.67
BES	8921.50	11103.92	14239.38	15230.99	18229.01
HES	13796.24	14260.71	13779.09	15040.40	15251.37
GOV	7358.14	9569.13	9897.01	11228.15	13132.55
PNP	8.51	56.81	40.80	31.51	2.74
REVISED					
GERD/GDP	0.77	0.87	0.90	0.93	0.92
BES	0.23	0.27	0.34	0.34	0.36
HES	0.35	0.35	0.33	0.34	0.30
GOV	0.19	0.24	0.24	0.25	0.26
PNP	0.00	0.00	0.00	0.00	0.00

Source: Statistical Office of the Republic of Serbia, absolute values are expressed in millions of RSD

GDP - Gross domestic product (in millions of RSD), **GERD** - General expenditure for R&D, **BES** - Business enterprises sector, **HES** - Higher education sector, **GOV** - Government sector – Institutions, **PNP** - Private non-profit sector



Research capacities in the agri-food sector of Serbia

- 25 research institutes
- 2 centres of excellence
- 12 faculties
- 15 secondary schools
- 35 units of advisory and extension service
- 24 agri-food companies
- 17 clusters and
- 4 business incubators



Institutes

No	Institution name	Location
1	Institute of Field and Vegetable Crops	Novi Sad
2	Institute for Vegetable Crops	SmederevskaPalanka
3	Maize Institute	ZemunPolje
4	Institute for Medicinal Plant Research “Dr. Josif Pancic”	Belgrade
5	Institute for Chemistry, Technology and Metallurgy	Belgrade
6	Institute of Molecular Genetics and Genetic Engineering	Belgrade
7	Institute of Food Technology	Novi Sad
8	Institute for Soil Science	Belgrade
9	Institute for Plant Protection and Environment	Belgrade
10	Institute for Science Application in Agriculture	Belgrade
11	Institute of Lowland Forestry and Environment	Novi Sad
12	Institute of Forestry	Belgrade
13	Institute BioSense	Novi Sad
14	Institute of Meat Hygiene and Technology	Belgrade
15	Fruit Research Institute	Cacak
16	Scientific Institute of Veterinary Medicine of Serbia	Belgrade
17	Scientific Veterinary Institute Novi Sad	Novi Sad
18	Institute for Animal Husbandry	Belgrade
19	Institute of Agricultural Economics	Belgrade
20	Institute for Multidisciplinary Research	Belgrade
21	Institute for Biological Research “Sinisa Stankovic”	Belgrade
22	Vinca Institute for Nuclear Science	Vinca
23	Institute for Applied Nuclear Energy	Belgrade
24	Institute of Fruit Growing and Viticulture	Novi Sad
25	Institute for Forage Crops	Kruševac



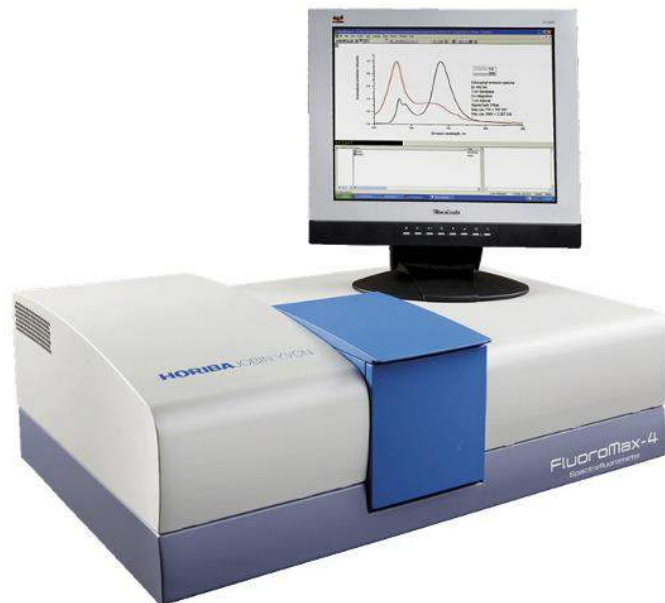
Faculties

No	Faculty Title	Location
1	Faculty of Technology	Novi Sad
2	Faculty of Agriculture	Novi Sad
3	Faculty of Sciences	Novi Sad
4	Faculty of Agriculture Belgrade	Zemun
5	Faculty of Biology	Belgrade
6	Faculty of Forestry	Belgrade
7	Faculty of Agronomy	Cacak
8	Faculty of Chemistry	Belgrade
9	Agriculture Faculty	Krusevac
10	Faculty of Agriculture	Lesak
11	Faculty of Organic Agriculture, University Educons	Sremska Kamenica
12	Faculty for Biopharming, Megatrend University	Backa Topola



Centers of Excellence

No	Institution	Location
1	Center of Excellence for Molecular Food Sciences, Faculty of Chemistry, University of Belgrade	Belgrade
2	Center of Excellence for Legumes, Institute of Field and Vegetable Crops, National Institute of the Republic of Serbia	Novi Sad



Human resources

Table 2. Total number of employees in research institutes and faculties

	Total	Male	Female	<30	31-40	41-50	51-60	≥61
PhD	1103	439	664	5	266	310	214	67
MSc	213	87	126	53	55	25	14	2
BSc	460	201	249	94	118	71	55	47
Secondary education	536	236	299	18	54	144	162	28
Primary school	271	145	128	12	39	58	70	37
Subtotal	2583	1108	1466	182	532	608	515	181
%	100	42.9	56.8	7.0	20.6	23.5	19.9	7.0

Table 3. Total number of full-time research staff in research institutes and faculties

	Total	Male	Female	<30	31-40	41-50	51-60	≥61
PhD	1063	410	653	5	266	265	204	63
MSc	203	81	122	5	52	20	13	0
BSc	185	68	116	81	78	14	9	3
Subtotal	1451	559	891	91	396	299	226	66
%	100	38.5	61.4	6.3	27.3	20.6	15.6	4.5



Research areas and focus

Figure 1. Type of research

■ mainly fundamental ■ mainly developmental
■ mainly applied

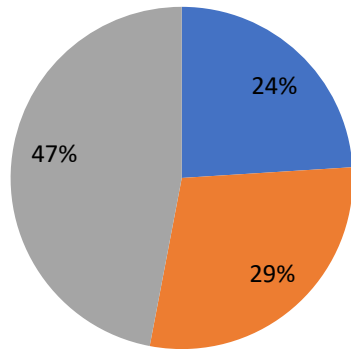
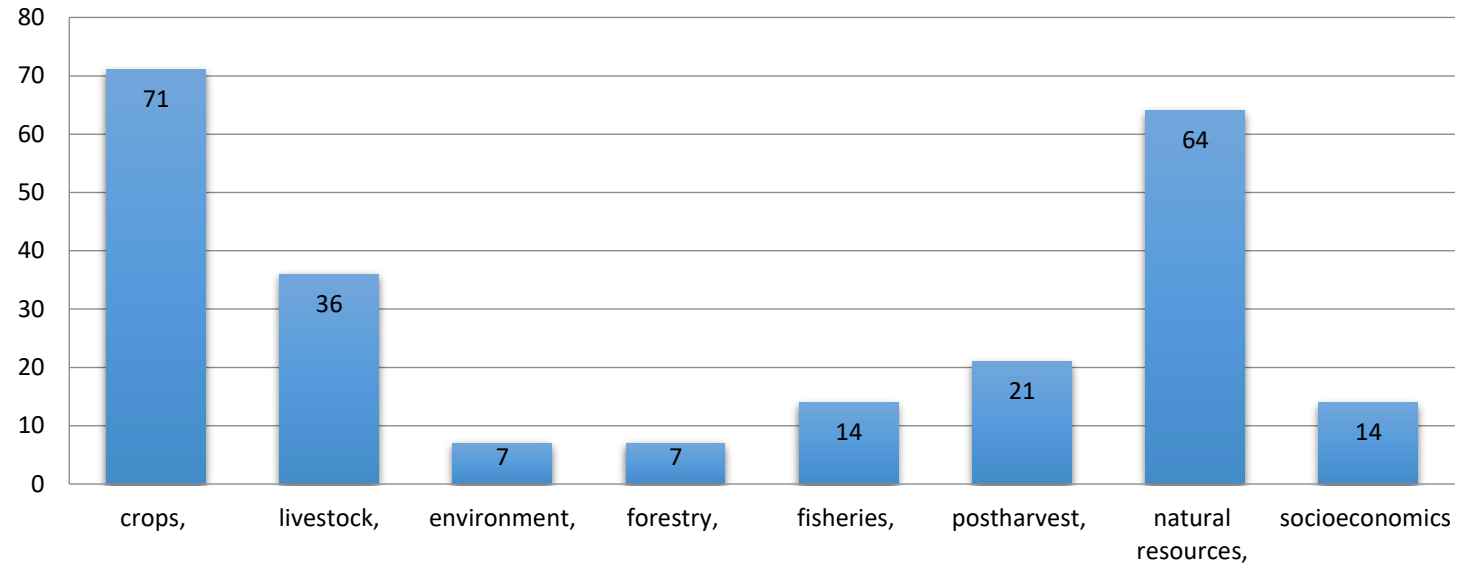
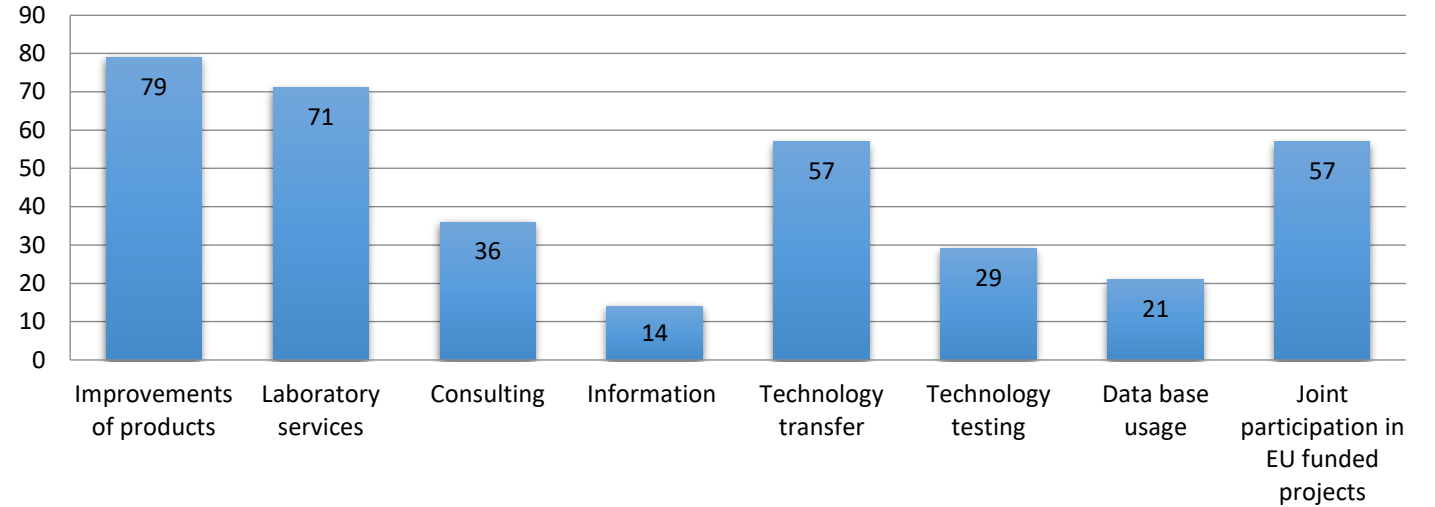


Figure 2. The main fields of research

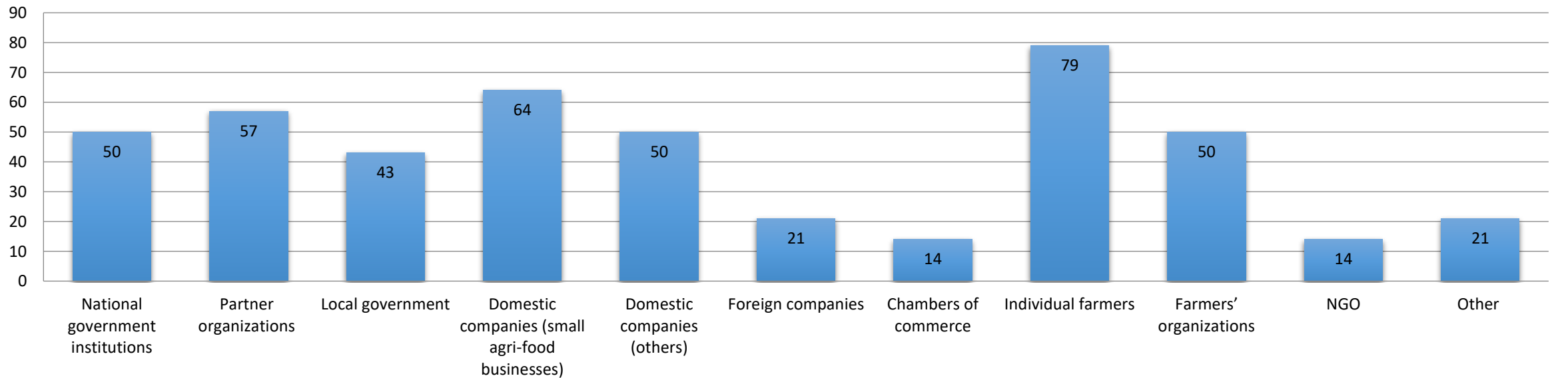


Innovation activities

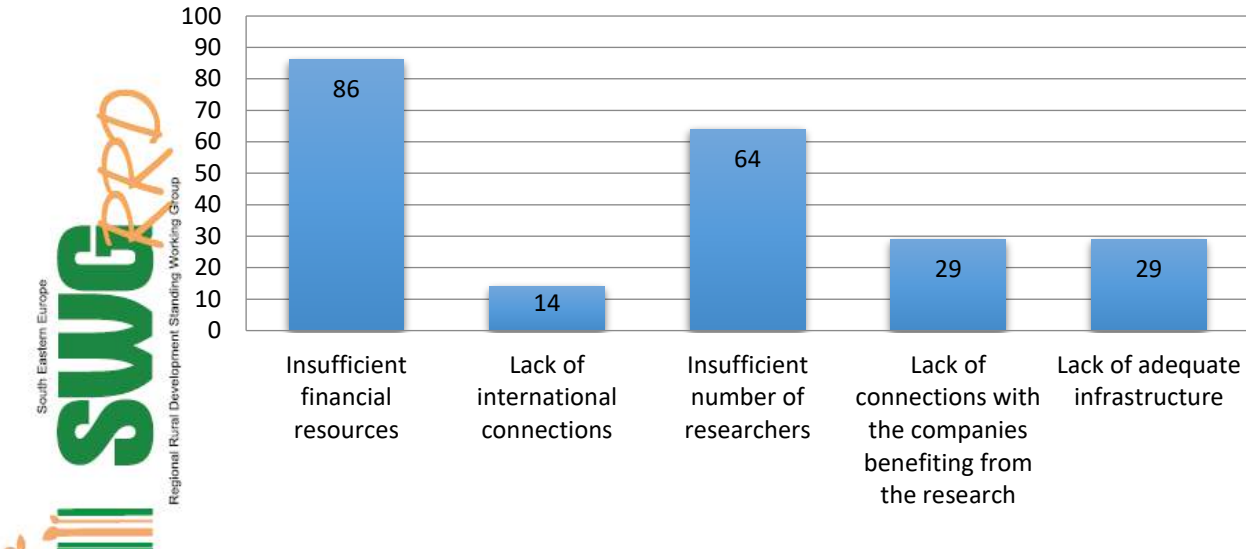
What type of activities for supporting innovation processes your institution provide?



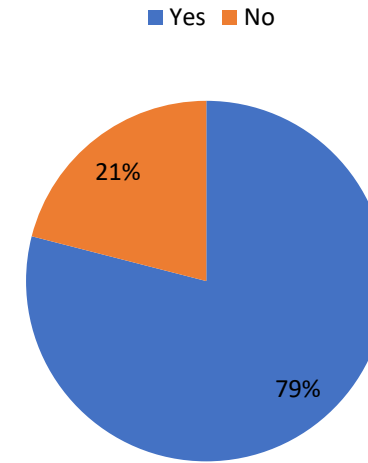
What organizations are interested to be users of your research results?



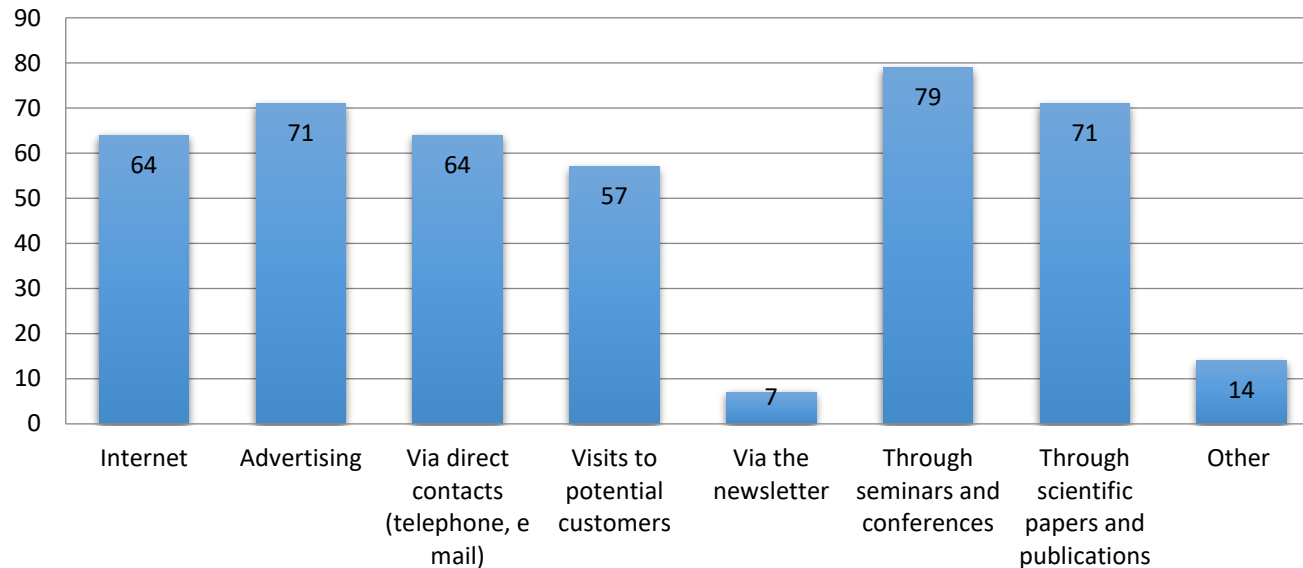
What are the factors which are slowing down research?



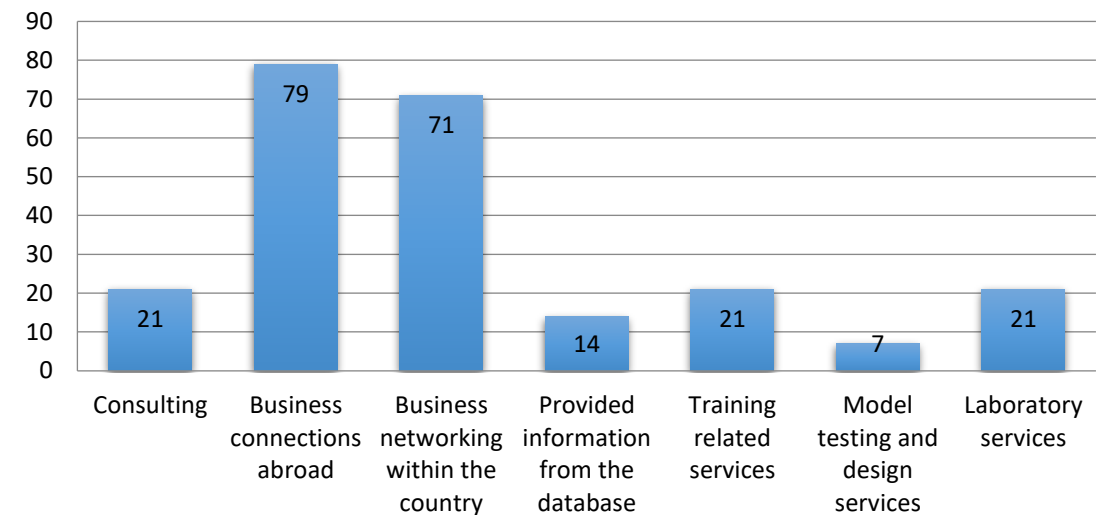
Do you have protected intellectual property?



How do you promote your services and knowledge?



What services does your institution need in order to support innovation processes?



Capacity of advisory service for knowledge transfer

No	Agricultural Advisory and Extension Service (PSSS)	Location
1	PSSS Šabac	Sabac
2	PSSS Loznica	Loznica
3	PSSS Valjevo	Valjevo
4	PSSS Smederevo	Smederevo
5	PSSS Požarevac	Pozarevac
6	PSSS Kragujevac	Kragujevac
7	PSSS Jagodina	Jagodina
8	PSSS Negotin	Negotin
9	AGROZNAJJE ZAJEČAR (Zaječar and Boljevac)	Zajecar
10	POLJOSERVIS (Knjaževac and Soko Banja)	Knjazevac
11	PSSS Užice	Uzice
12	PSSS Čačak	Cacak
13	PSSS Kraljevo	Kraljevo
14	PSSS Novi Pazar	Novi Pazar
15	PSSS Kruševac	Krusevac
16	PSSS Niš	Nis
17	PSSS Prokuplje	Prokuplje
18	PSSS Piro	Piro
19	PSSS Leskovac	Leskovac
20	PSSS Vranje	Vranje
21	PSSS Mladenovac	Mladenovac
22	PSSS KosovskaMitrovica	KosovskaMitrovica
23	PSS InstitutTamiš	Pancevo
24	PSS PadinskaSkela	PadinskaSkela
25	PSS BačkaTopola	BackaTopola
26	PSS Kikinda	Kikinda
27	PSS Senta	Senta
28	PSS Sombor	Sombor
29	PSS Sremska Mitrovica	Sremska Mitrovica
30	PSS Subotica	Subotica
31	PSS AgrozavodVršac	Vrsac
32	PSS Zrenjanin	Zrenjanin
33	PSS Novi Sad	Novi Sad
34	PSS Vrbas	Vrbas
35	PSS Ruma	Ruma



Based on the Law on agricultural advisory and expertise, the Services are obliged to provide:

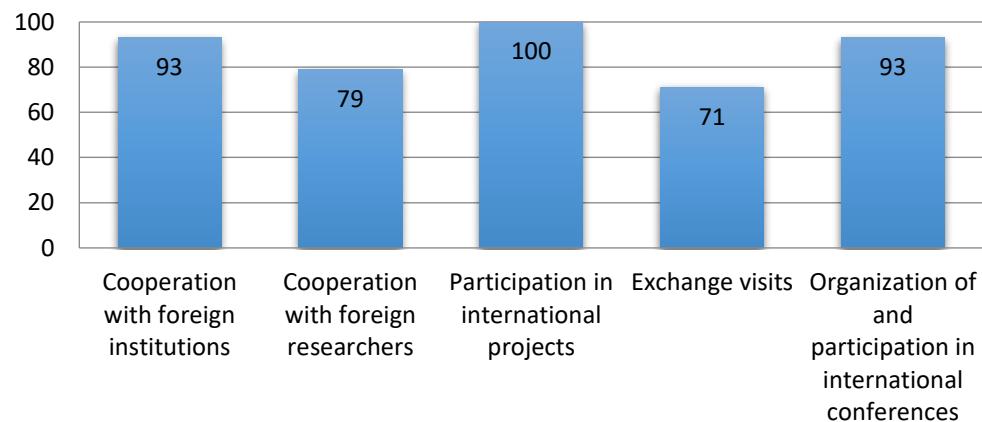
- expert assistance in the application of scientific knowledge and new technologies;
- transferring practical knowledge and skills for technological and technical improvement of production;
- information for farmers on good agricultural practices;
- conducting demonstration experiments in different fields of agriculture;
- training of agricultural producers to manage agricultural holdings and to account expenses of the holding;
- assistance in affirmation of rural development;
- advice on plant protection based on the data of the forecasting and reporting service;
- information to stimulate interest based associations and entrepreneurship in agriculture;
- advice and proposing to expand economic activities as supplementary activities on the farm;
- recommendations in the field of animal husbandry;
- advice and recommendations on rational land use;
- advisory assistance in other areas of interest to farmers.



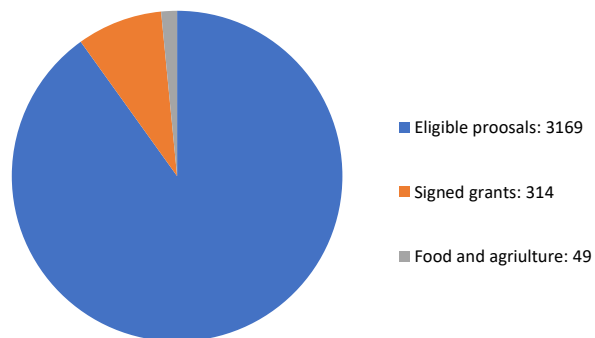
Scope and extent of the EU, international and regional cooperation



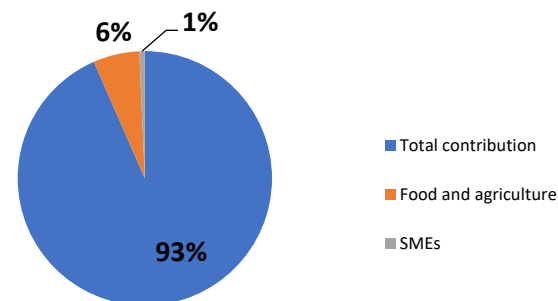
Different kinds of international links that research institutions maintain



Serbia success rate in H2020 programme



H2020 EU financial Contribution



Needs and potentials

- To preserve and further improve the scientific and research potential that we have (especially in human resources), with simultaneous development of new resources
- Increase of public research contribution to social and economic development
- When it comes to financing science, the cooperation among different sources (public, private, national and international) must be enhanced
- The existing institutional framework for cooperation among different stakeholders in agri-food sector, needs additional joint efforts, financial support, tools and commitment of all actors for better implementation into practice
- The capacity of advisory services (human and financial resources) to provide support for technology transfer into practice should be further improved in order to enable their availability to as many agricultural producers as possible
- Better regional cooperation and networking is needed in order to improve our capacities and strengthen our regional competitiveness for EU and other international programs (EU already recognise us a WB region)
- Research, education and advisory sector in Serbia have some positive trends, ideas and defined strategical goals, but there is still a lot of space for its further improvement



Thank you for your attention!

South Eastern Europe
SWG RRD
Rural Development Standing Working Group



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