

Study on the research, innovation and technology transfer capacities and on the recent agricultural policy developments in the context of the EU approximation process in the pre-accession countries

Task 2: Assessment of research, innovation and technology transfer capacities in the agri-food sector in the Western Balkan countries

THE REPUBLIC OF SRPSKA

Interim report

Željko Vaško

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JOINT RESEARCH CENTRE

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Introduction remarks

- The main sources of data collection were secondary data (statistical bulletins, web) and questionnaire surveys, with requests for additional clarifications.
- The questionnaire was sent before the start of the COVID-19 pandemic. Some responded before, some during, and some never.
- An extensive and confusing questionnaire is the reason why some questions were not answered.
- Received data from 7 (of 10) research institutions, 2 (of 2) faculties, 1 (of 3) secondary agricultural schools, 1 advisory services, 2 ministries (entity level).
- Dual status of university researchers (faculty and institute(s)).



Introduction remarks

- The ministry responsible for scientific research in the Republic of Srpska is Ministry for Scientific and Technological Development, Higher Education and Information Society
- 1,212 researchers and 94 research institutions are registered in the E-CRIS.RS database (Current Research Information System).
- The Republic of Srpska has the Strategy of Scientific and Technological Development of Republic of Srpska 2017-201 "Knowledge for Development".
- Smart Specialization Strategy does not exist, but scientific institutions confirmed that implement that approach.



Inventory of all relevant agri-food research capacities

- Research institutions (9)

1. Agricultural Institute of the Republic of Srpska,
2. Institute of Genetic Resources, University of Banja Luka,
3. Veterinary Institute „Dr Vaso Butozan“.
4. Institute of Crop Farming,
5. Institute of Horticulture,
6. Institute of Agroecology and Soil,
7. Institute of Animal Husbandry,
8. Institute for Reproduction of Domestic Animals,
9. Institute for Agricultural Economics and Rural Development
10. Faculty of Agriculture, University of East Sarajevo.

- Faculties (2)

1. Faculty of Agriculture, University of Banja Luka,
2. Faculty of Agriculture, University of East Sarajevo,

- Public Extension Services (1)

- Business incubators (4)

- Clusters (7)

SWG
RRD



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Research institutes

- 3 independent institutes and 7 within the faculties.
- All are state-owned (100%).
- One institute is mainly engaged in fundamental and one in developmental research. It is difficult to determine in the case of faculties, because they practically deal with all three types of research (fundamental, developmental and applied).
- The average annual income of the two institutes in 2018 was EUR 924,000 (rounded to EUR 1 million). The average annual income of the two faculties was EUR 1,436,000 (rounded up to EUR 1.5 million), but the total income of the faculties combine incomes for education and for scientific research (aprox. 20% for scientific reserach).



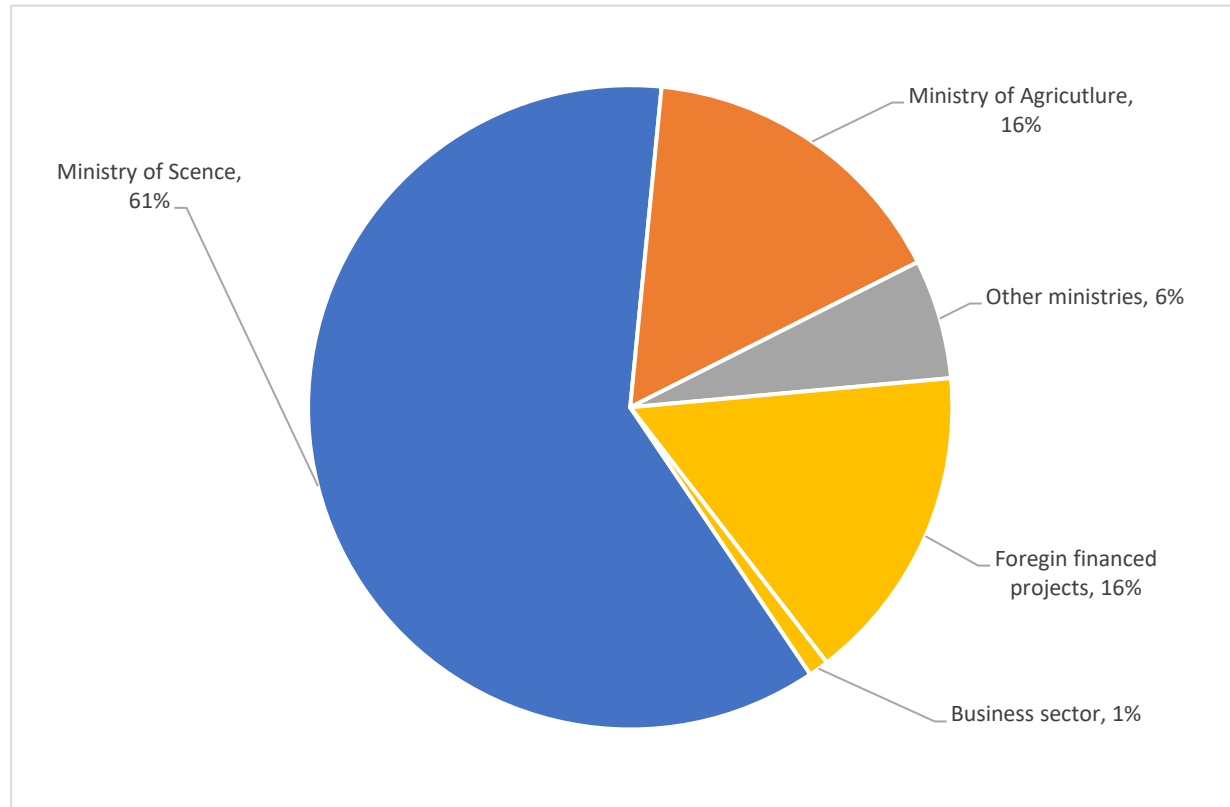
Research staff

(Total number 257, 63.8% PhD and MSc)

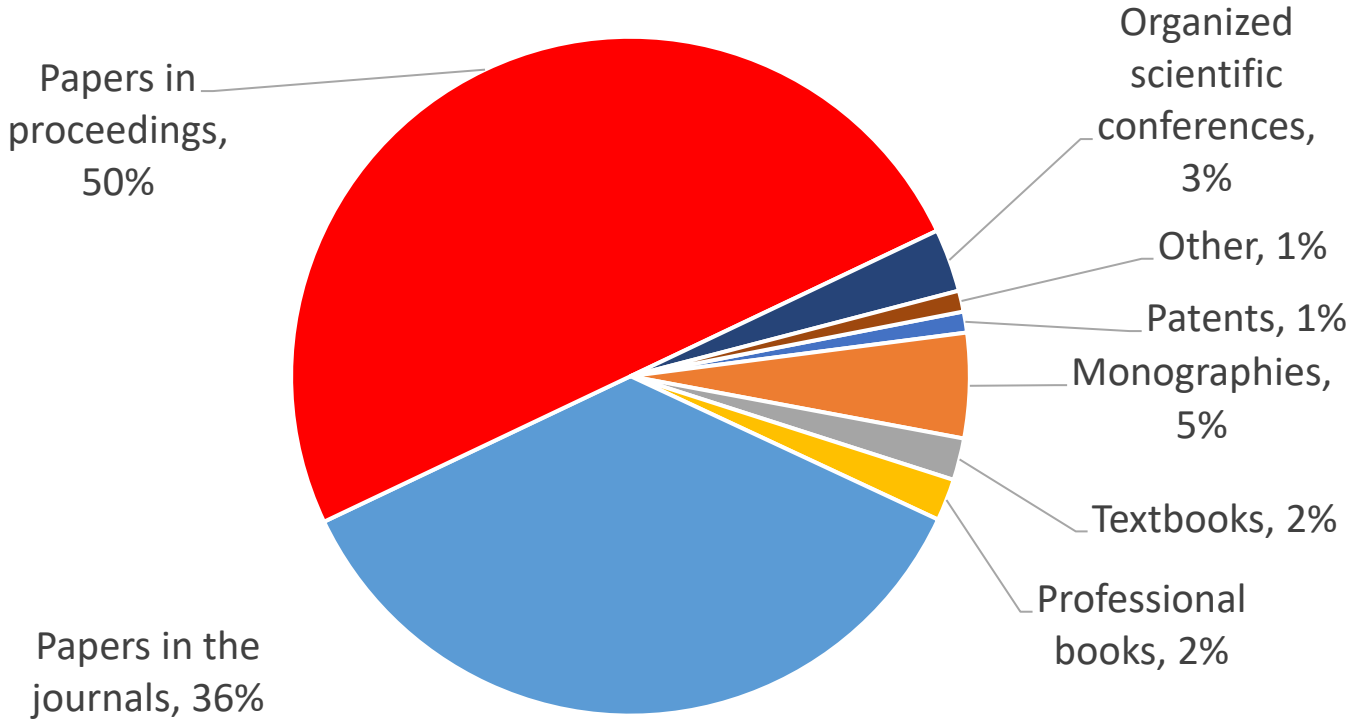
	Total	Male	Female	<30	31-40	41-50	51-60	≥61
	100%	44.0%	56.0%	8.2%	27.6%	33.9%	21.8%	8.6%
PhD	45.9%	60.2%	34.7%	0.0%	28.2%	52.9%	60.7%	81.8%
MSc	17.9%	16.8%	18.8%	61.9%	42.3%	1.1%	3.6%	0.0%
BSc	15.6%	12.4%	18.1%	38.1%	21.1%	17.2%	3.6%	0.0%
Secondary education	19.1%	10.6%	25.7%	0.0%	8.5%	24.1%	32.1%	18.2%
Primary school	1.6%	0.0%	2.8%	0.0%	0.0%	4.6%	0.0%	0.0%
Subtotal	100%	100%	100%	100%	100%	100%	100%	100%



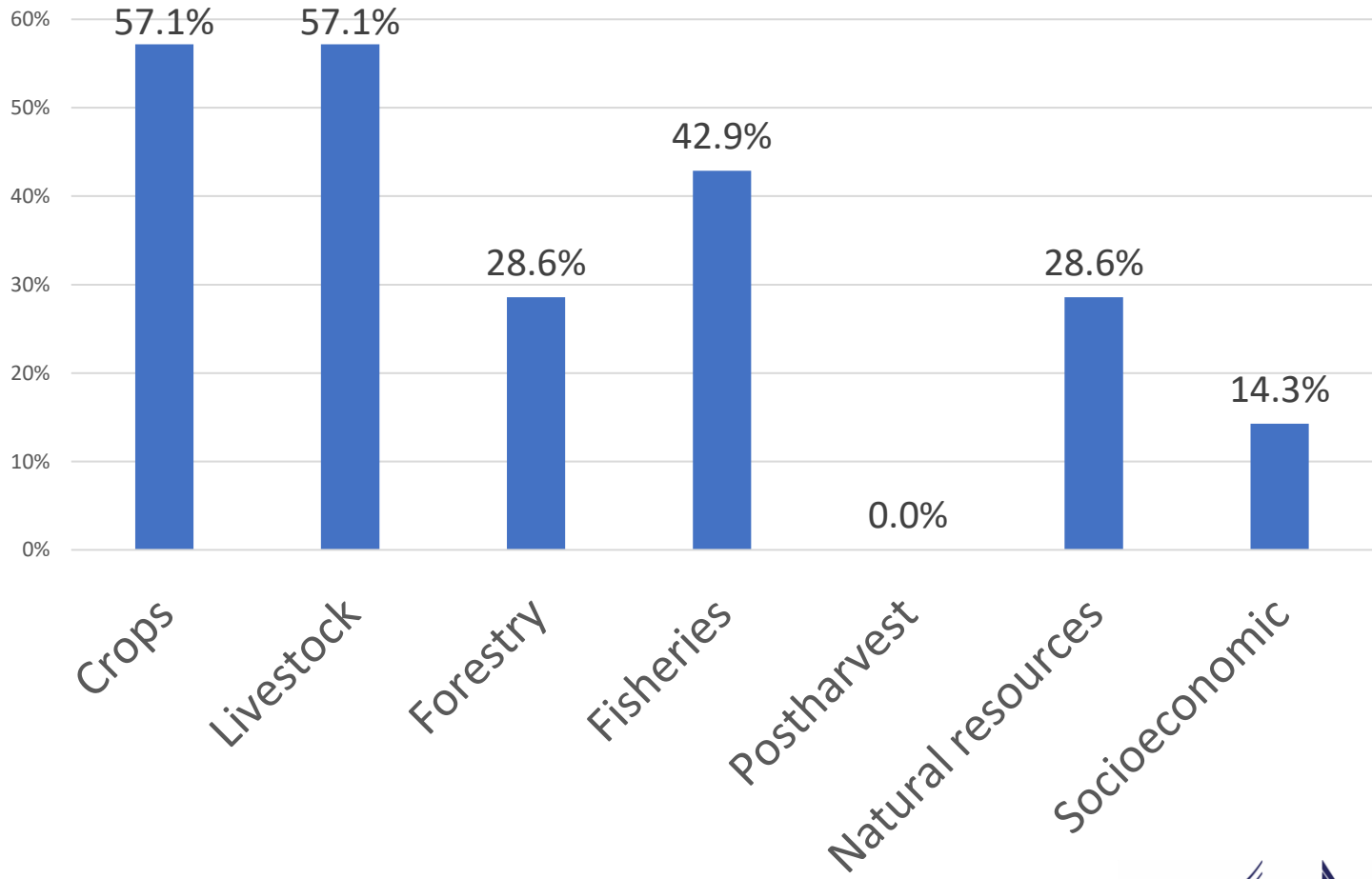
Sources of financing scientific research activities of institutes and faculties



Scientific results



Research focus



Agricultural faculties, schools and extension service

- 2 faculties, 3 secondary schools and 1 extension service.
- All are state-owned (100%).
- The agricultural school and the advisory service are fully funded from the public budget. Faculties are about 80% funded from the budget and 20% from other sources.
- Two faculties have reported a total of 4 projects of cooperation with the business sector.
- The two faculties have signed 27 agreements on scientific and technical cooperation. However, a significant number of the agreements were signed by the two universities to which faculties belong



Employees and students

(Total number 274, 182 educational or advisory staff)

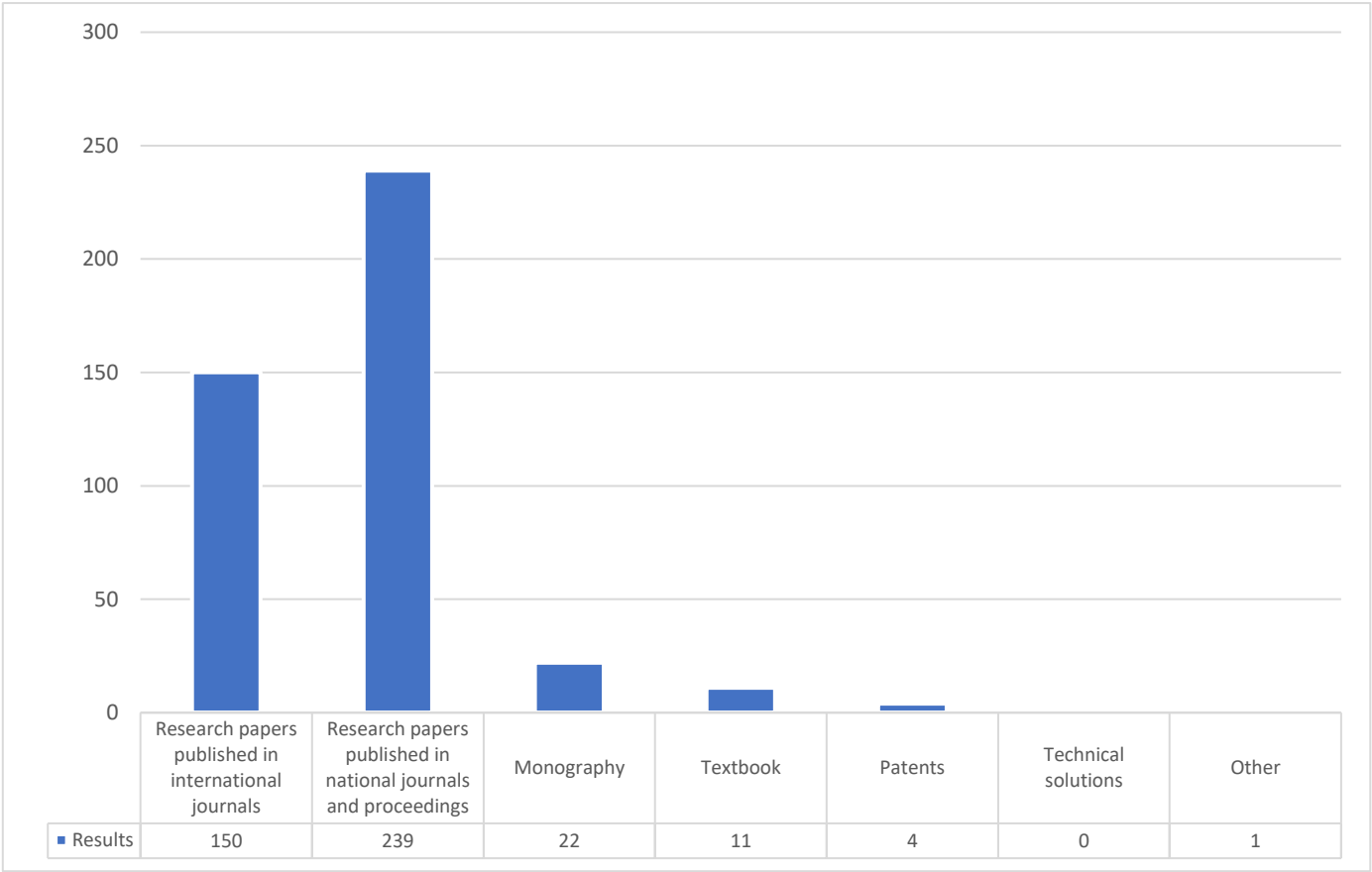
	Total	Male	Female	<30	31-40	41-50	51-60	≥61
	100%	40.5%	59.5%	4.0%	19.7%	46.0%	24.5%	5.8%
PhD	20.6%	22.9%	21.7%	0.0%	22.4%	31.3%	19.8%	30.0%
MSc	9.4%	7.6%	13.0%	12.3%	38.8%	2.4%	2.0%	0.0%
BSc	45.3%	52.2%	30.4%	71.9%	30.6%	27.7%	53.5%	40.0%
Secondary education	19.4%	12.7%	32.6%	3.5%	8.2%	34.9%	17.8%	30.0%
Primary school	5.3%	4.5%	2.2%	12.3%	0.0%	3.6%	6.9%	0.0%
Subtotal	100%	100%	100%	100%	100%	100%	100%	100%

Students

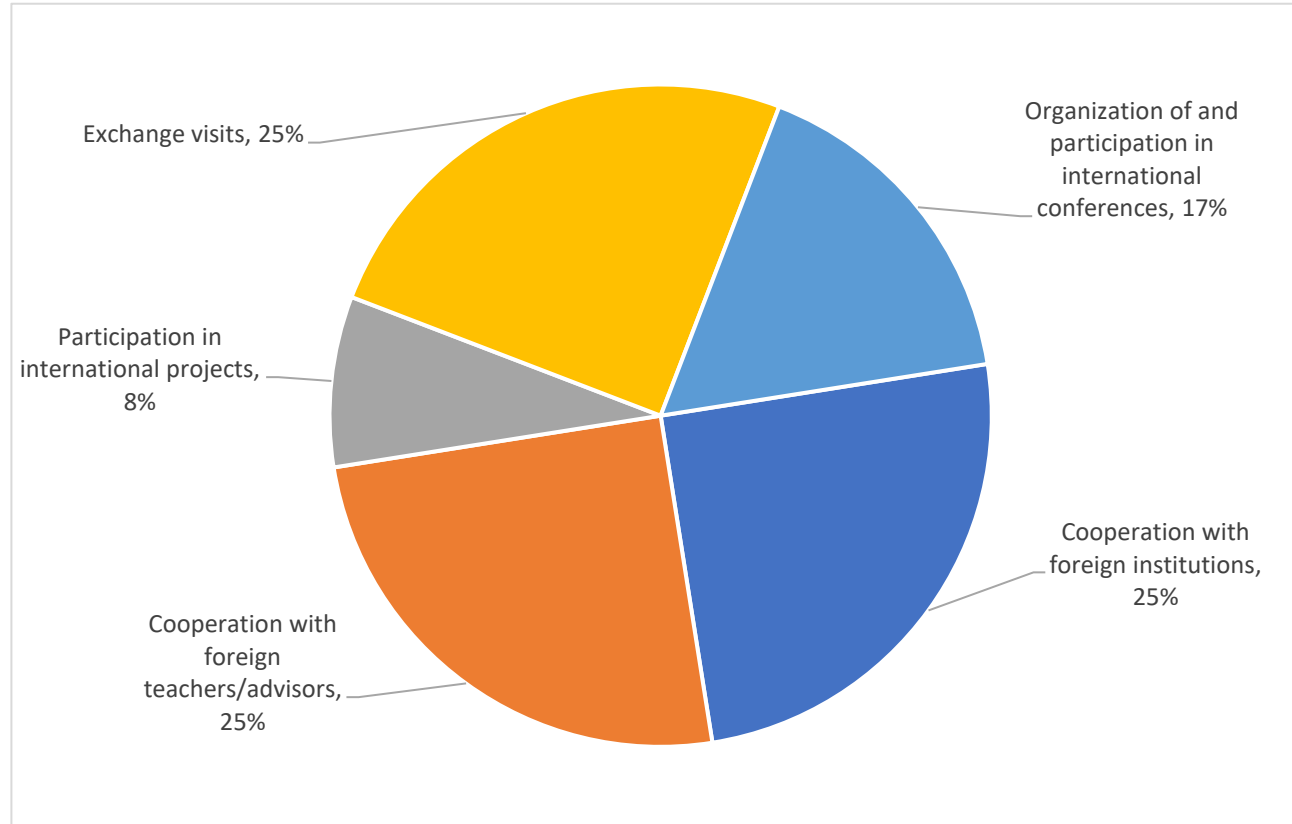
Area of education	2015	2016	2017	2018	2019	AVER
Agriculture sciences	383	358	235	155	143	255



Results in the last 5 years



Institutional international links



The role of other relevant stakeholders in agri-food sector in prompting technological and knowledge transfer and adoption (1)

- In the Republic of Srpska, competencies for the development of agriculture and the facilitation of new technologies and innovations in agro-food sector are divided between several ministries and other institutions.
- The **Ministry of Agriculture, Forestry and Water Management** is crucial for the development of agriculture.
- The **Ministry of Scientific and Technological Development, Higher Education and Information Society** in charge for science and high education.
- There are also the Ministry of Economy and Entrepreneurship, Development Agency of the Republic of Srpska and the local SME development agencies, Chamber of Commerce, ...



The national budget for science

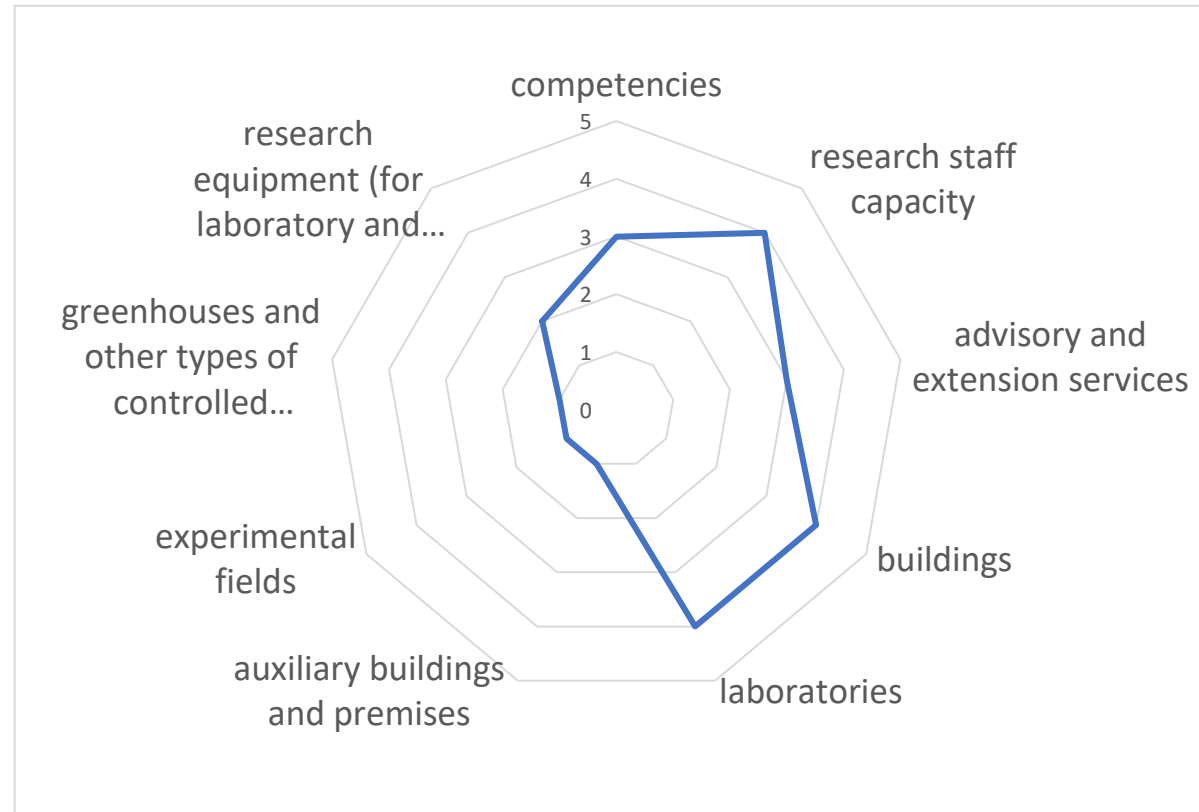
	2015	2016	2017	2018	2019
Total in EURs	1,256.410	424.102	730.769	633.333	-
% of GDP	0.027	0.008	0.014	0.011	-
% of budget dedicated to agri-food sector	-	-	-	-	-

The share of agricultural sector in GDP

Share of agricultural sector in GDP	2015	2016	2017	2018	2019
Total in mill. EUR	438	459	431	482	-
%	9,3%	9,3%	8,4%	8,8%	-



Rating of the development of research and technology transfer capacities



The role of other relevant stakeholders in agri-food sector in prompting technological and knowledge transfer and adoption (2)

- There are in 7 **clusters** established with the support of the IFAD project. About 15 SMEs and 6 cooperatives are involved in the clusters.
- No **business incubators** presence in agri-food sector.
- No specific **support for SMEs** in agriculture sector. Support measures are the same for big enterprises and for SMEs and family farms and relate to support for current production, investment support, support for rural development measures, systemic support measures.
- About 130 **agricultural producers associations** (as NGOs). Each municipality has at least one association of agricultural producers. In addition, there are about 20 republic associations (apex organizations), as well as about **80 active cooperatives** and 30 newly established

The role of other relevant stakeholders in agri-food sector in prompting technological and knowledge transfer and adoption (3)

- There is a **network of agricultural advisory service** offices
- Total **foreign direct investment (FDI)** into Bosnia and Herzegovina are in the range between EUR 300 and 500 hundred million in the last ten years (2010-2019), which is between 2% and 3% of its GDP. Among the top 10 sectors in which FDI ended up is not agriculture, which means that less than 1% of total foreign investment is invested in that sector.

The role of Horizon Europe or Structural funds or IPA to the research, innovation and technology transfer capacities in agri-food sector

- 1 HORIZON 2020 project.
- 11 IPA II projects (policija area I).
- The second policy area was cross-border cooperation and regional development projects and, although many projects were implemented, a small number had some connection with the agricultural sector.
- BiH still does not have access to IPARD funds, but some projects have been approved through UNDP and GIZ (IPARD like).

