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IDENTIFYING TECHNOLOGICAL CHANGES AND SKILL NEEDS IN THE AGRI-FOOD SECTOR OF MONTENEGRO: ORGANIC FOOD

SUMMARY REPORT

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INTRODUCTION

This report[1] is part of a broader study on the technological changes and skill needs of the Western Balkan agri-food sector, conducted by the European Training Foundation (ETF). This aim of this report is to examine the potential of the North Macedonian agri-food sector from the perspective of the skill supply and demand in the following three niches of the agri-food value chain: digitisation for agriculture and food processing, biochemical products for agriculture and organic foods.

The study aims to inform further steps at the national and regional levels to support innovation ecosystems, VET, higher education and skill development, and lifelong career guidance systems, and thus contribute to the successful implementation of Smart Specialisation Strategy in the agri-food sector in North Macedonia.

OVERVIEW

Organic farming is an agricultural method that aims to produce food using natural substances and processes. Producing organically means respecting the rules on organic farming, which are designed to promote environmental protection, maintain biodiversity and build consumer trust in organic products. Organic farming rules also encourage a high standard of animal welfare and require farmers to meet the specific behavioural needs of animals. In 2021, the EU adopted an action plan for the development of organic production to support both production and consumption and to further enhance sustainability, in line with the European Green Deal, the Farm to Fork Strategy and the Biodiversity Strategy.

EU citizens increasingly value organic products. Based on the 2020 Eurobarometer survey on EU agriculture and the Common Agricultural Policy (CAP), citizens believe that organic products are more likely to comply with specific rules on pesticides, fertilisers, and antibiotics (82 % agreed), are more environmentally friendly (81 %), and are produced with higher respect for animal welfare (80 %). According to the survey, 56 % of citizens recognise the organic logo, up from 27 % in 2017[2]. The retail sales of organic products in the EU doubled between 2015 and 2020.

The share of agricultural land under organic farming in the EU is growing rapidly. Over the period 2012-2020, its share increased by more than 50 %. On average, though with substantial variation across EU Member States, organic farms in the EU are bigger than conventional farms and run by younger farm managers. The European Commission has set a target of at least 25 % of the EU's agricultural land to be under organic farming by 2030.

In Montenegro, in 2020, the total agricultural area under organic production was 4,823 ha or 1.8 % of the total agricultural area[3], which is below EU average (3.4 %)[4]. A total of 306.33 ha of organic production in perennial plantations were certified, which is a 36 % increase compared to 2016. Apples and plums are the most certified fruits, and the potato is the most certified vegetable. The most

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2 EC (2022). Europeans, Agriculture and the CAP 2022. Available here.

3 Programme for Development of Agriculture and Rural Areas in Montenegro under IPARD IIII 2021-2027, Ministry of Agriculture, Forestry and Water Management, 2022.

4 "The World of Organic Agriculture Statistics and Emerging Trends 2022", Research Institute of Organic Agriculture FiBL IFOAM – Organics International, available here.

produced are chokeberry and apple juice. In the olive growing sector (including olive oil processing), there is one long-term organic producer and seven producers in transition[5].

In the period 2016-2020, there was a significant increase in agricultural land and crops in organic farming. Thus, the increase in the area under permanent crops is 36 %, while the increase in organic meadows and pastures in the observed period was even higher, constituting 47 %.

Table 1. Organic production 2016-2020

Area of Production	2016	2017	2018	2019	2020
Perennial plantings (ha)	412	426	456	508	564
Arable land (ha)	272	262	309	321	307
Meadows and pastures (ha)	2,680	2,032	3,696	3,925	3,952
Cattle breeding (heads)	n/a	n/a	403	39	393
Sheep breeding (heads)	1,428	863	1,092	1,309	1,369
Beekeeping (hives)	506	839	1,103	1,964	3,381
Poultry (hens)	267	390	170	160	300

Source: MAFWM, 2020

For the purpose of this study, the organic foods market niche was analysed through four broader NACE classification groups:

- crop and animal production, hunting and related service activities (A1)
- fishing and aquacultures (A3)
- manufacture of food products (C10)
- and manufacture of beverages (C11).

According to the data of the Ministry of Agriculture, Forestry and Water Management, in 2020 there were 423 producers in the Register of Organic Production, out of which 181 were certified. The number of registered producers increased by 7.6 %, while the number certified increased by 30.21 % in 2020 compared to 2019. Over 90 % of organic producers were based in the northern part of the country, while 8 % were located in the central and southern parts of Montenegro.

SKILL DEMAND

The profiles of the companies' most in-demand, based on the occupational profiles of current employees, relate to agricultural production, food processing, packaging, quality control and marketing. Additionally, companies rely on administrative occupations and lower-skilled workers that support production.

The interviewed companies emphasised teamwork and the willingness to work and learn as the most important skills they considered in employment. Knowledge of the agri-food sector and food production processes, as well as user ICT skills, were also seen as important.

Based on these skill needs, it can be assumed that occupations in demand include (but are not limited to) the following (see Tables 2 and 3)[6].

Table 2. Relevant Technical occupations identified by companies

Technical occupations	
• 2132.1 - agricultural scientist • 2132.2 - agronomist • 2145.1.4 - food technologist • 2263.2 - food safety specialist	• 3119.5 - food technician • 3142.1 - agricultural technician • 3240.2 - veterinary technician • 8160.34 - food production operator

[5] Programme for Development of Agriculture and Rural Areas in Montenegro under IPARD IIII 2021-2027, Ministry of Agriculture, Forestry and Water Management, 2022

[6] Based on skillsets in the ESCO classification of Skills, Competences and Occupations. Available here.

Table 3. relevant BUSINESS support OCCUPATIONS identified by COMPANIES

Business support occupations	
• 1221.5 - digital marketing manager	• 2431.10 - marketing consultant • 2431.11 - market research analyst

According to the companies interviewed, one of the biggest challenges in the niche, particularly when it comes to ICT skills, was staff retention. Skilled staff were looking for jobs abroad. The economic and political situation in Montenegro was believed to push young people to emigrate abroad and look for work outside Montenegro.

The interviewed companies cooperated with education and training providers, mainly to share real business experience with university students and to address their own training needs. Companies stressed that the quality of graduate knowledge is low when it comes to practical skills. However, business intermediary bodies had no interest in cooperating with them along with the interviewed companies, as they did not see any benefits from this cooperation.

SKILL SUPPLY

Vocational education and training

Vocational education and training programmes are broader in scope and there are no programmes specifically on organic agriculture and food production.

Business intermediary bodies

There are no targeted trainings provided by business intermediary bodies to organic food producers. However, some isolated efforts do exist, such as, the Innovation and Entrepreneurship Centre.

Higher education and research

Higher education in Montenegro is organised through academic and applied study programmes. There are no programmes specifically on organic agriculture and food production.

In terms of research, there are some isolated efforts, such as research conducted by the Innovation and Entrepreneurship Center Tehnopolis. The research consisted of mapping the innovation needs of companies and agricultural producers in the field of food production, protection of natural resources during the production cycle and innovation needs to mitigate the effects of climate change.