



AGRICULTURAL WASTE IN EU AND ROMANIA WITHIN THE FRAMEWORK OF ADVANCING BIOECONOMIC GROWTH

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Abstract: Efficient agricultural waste management is crucial for resource utilization and environmental protection. The study highlights a significant changes in waste volume in Europe and Romania between 2014 and 2020, emphasizing the importance of support for sustainable agricultural practices and waste management technologies.

Introduction

Agricultural waste is an essential component of the agricultural cycle and the global ecosystem. The transition to the bioeconomy is achieved with agricultural waste, bringing benefits to the environment and society. The bioeconomy is a new approach whereby agricultural waste is used sustainably.

Material and method

The material and method used in this study focuses on investigating and comparing the volume of waste generated in the agricultural sector in both Europe and Romania in the period 2014-2020. Quantitative analysis techniques were used to assess the impact on the population by reporting the amount of waste per person and per unit of agricultural area.

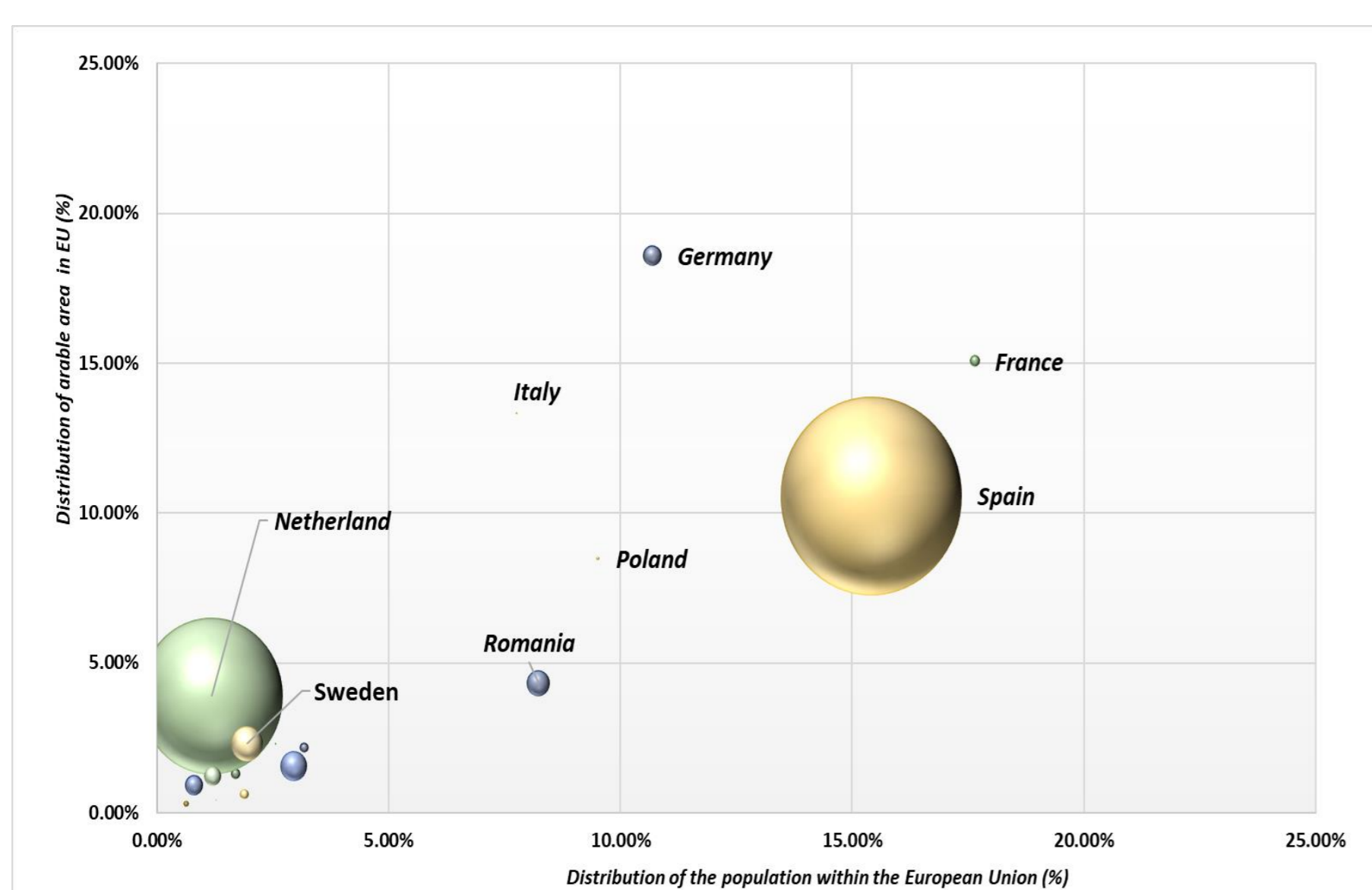


Figure 2. The intensity of the amount of waste generated in the agricultural sector at the EU-27 level in relation to the arable surface and population
 Source: Own processed data EUROSTAT (accessed 05.03.2024)

Results and discussions

- In 2020, agricultural waste comprised 0.99% of the overall waste generated across Europe, amounting to 21 million tons.
- A relatively high level of agricultural waste was observed in the Spain, Netherlands and France. The lowest are in Luxembourg, Cyprus and Malta.
- In Romania, agricultural activities contributed 3.37% to the total waste output across Europe in 2020. In 2020 the volume increased by 28.7% compared to 2014.

Generating of animal and vegetal waste by entities of Section A- Agriculture, forestry and fishing in EU and Romania				
Descriptions	European Union (tons)	% from total EU Agriculture, forestry and fishing waste	Romania (tons)	% from total EU vegetal and animal waste
2014	14,520,000	77.61%	541,332	3.73%
2016	16,250,000	78.46%	482,285	2.97%
2018	15,660,000	75.04%	559,509	3.57%
2020* EU-27	16,530,000	77.42%	699,920	4.23%

Source: Own processed data EUROSTAT (accessed 05.03.2024)

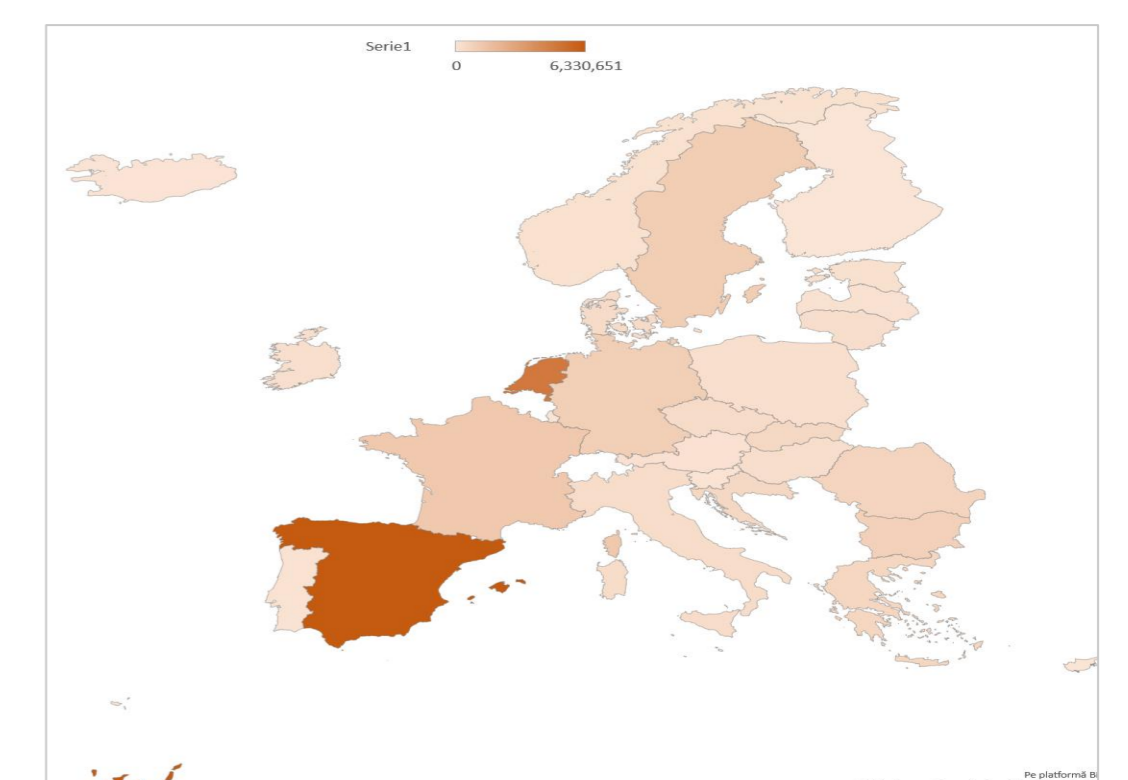


Figure 1. Total waste generation by entities of Section A- Agriculture, forestry and fishing in EU in 2020 (tons)
 Source: Own processed data EUROSTAT

- At EU-27 level, in 2020 the agricultural sector generated animal and vegetable waste increase by 13.84% compared to 2014. Romania revealed a rising trend, whit 30% in 2020 compared to the 2014.
- In terms of the volume of agricultural crop and animal waste per capita, in 2020, in the EU-27 it was 37 kg. Romania recorded a value of 36 kg per capita.
- More than 60% of European countries record a quantity of vegetal and animal waste per capita below the European average.

Conclusions

- The agricultural sector is a significant source of waste in Europe, and its volume has increased over time, underscoring the importance of sustainable resource management and environmental protection.
- There are significant differences in the distribution of agricultural waste between EU member states, with some countries being large generators. Understanding these differences is crucial to promoting a sustainable bioeconomy and efficient use of resources.
- Member States adopt various strategies for waste management, including recycling, energy recovery and landfilling.

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