



UNIVERSITY OF LIFE SCIENCES  
"KING MIHAI I" FROM Timisoara  
**Multidisciplinary Conference on  
Sustainable Development**  
15 – 16 May 2025



## Exploring Global Agriculture

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**Abstract:** Agriculture plays a central role in the development and prosperity of human society. It is essential nowadays, as a result of supporting the global economy, but also by ensuring food security. Although agriculture contributes modestly to the world's Gross Domestic Product (GDP), it nevertheless represents an essential pillar of many national economies, especially in developing countries.

Global agriculture is being significantly affected by climate change, and the Covid-19 pandemic has created additional financial problems for farmers. To cope with this climate change and combat its effects, it is necessary to increase productivity in agriculture and promote jobs in this sector.

The paper analyzes the structure of the total area, by use, the production of the main agricultural products and the number of animals in the period 2013-2022.

By capitalizing on its natural advantages and agricultural tradition, Romania can contribute to strengthening food security at the regional and European levels and can have a prominent role in the global economy.

### • Introduction

Agriculture, a foundational pillar of human civilization, faces unprecedented challenges in the 21 st century. Agriculture is important for meeting human needs by providing food and a wide range of biomedical and industrial products. Even though we are witnessing annual increases in crop production, approximately one in 10 people worldwide are affected by hunger, do not have enough food and suffer from micronutrient deficiencies and diet-related diseases.

Following multidisciplinary and interdisciplinary research, a call for “100 Essential Questions for the Future of Agriculture” was launched, sent to communities around the world to respond (scientists, engineers, farmers, entrepreneurs, policymakers and the general public) who are interested in the future of agriculture. Following the responses, essential words presented in Figure were identified.



### Key words for the future of agriculture

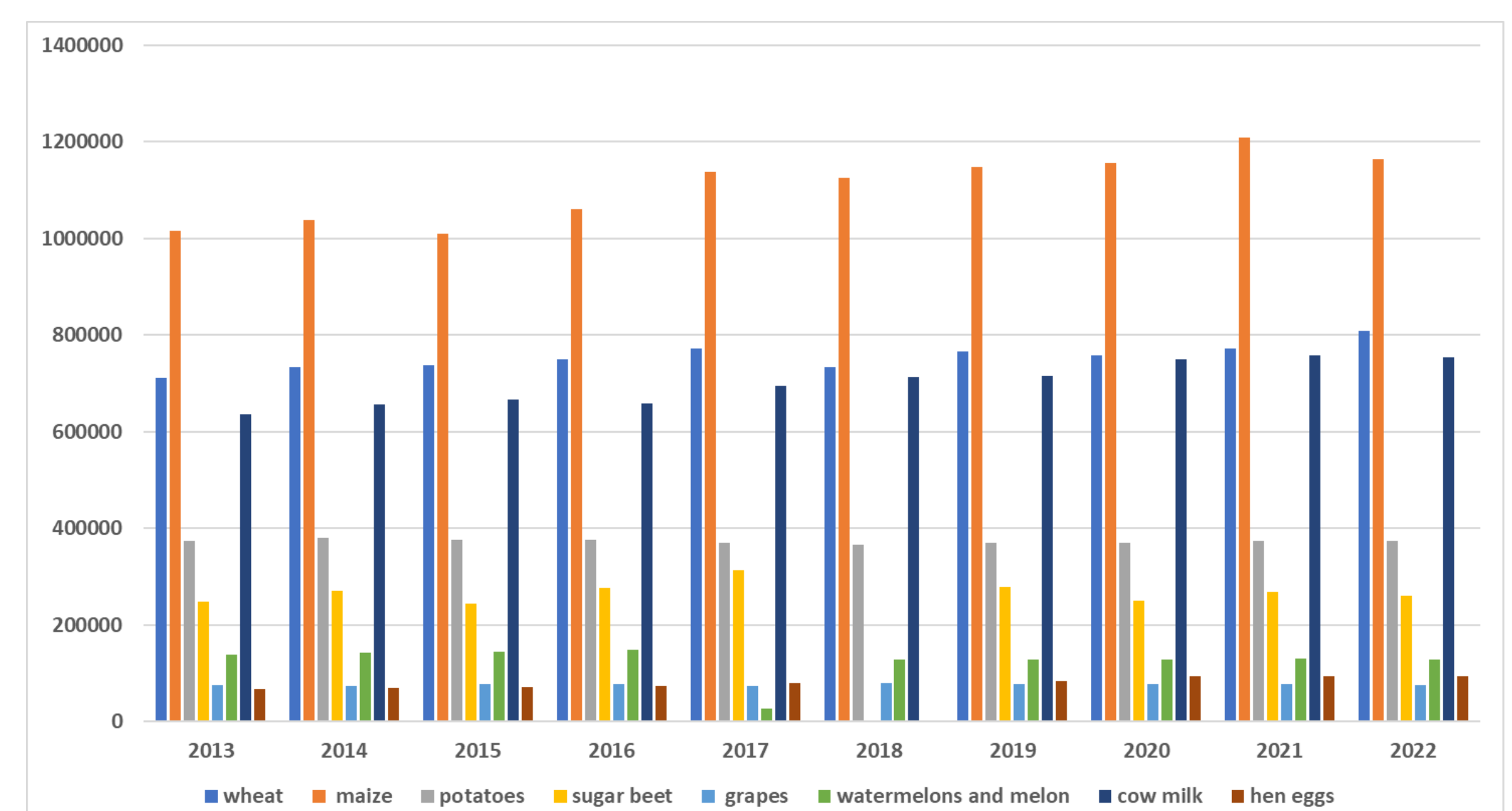
Sources: Modern Agriculture, Volume: 1, Issue: 1, Pages: 4-12, First published: 11 April 2023, DOI: (10.1002/moda.5)

### • Material and method

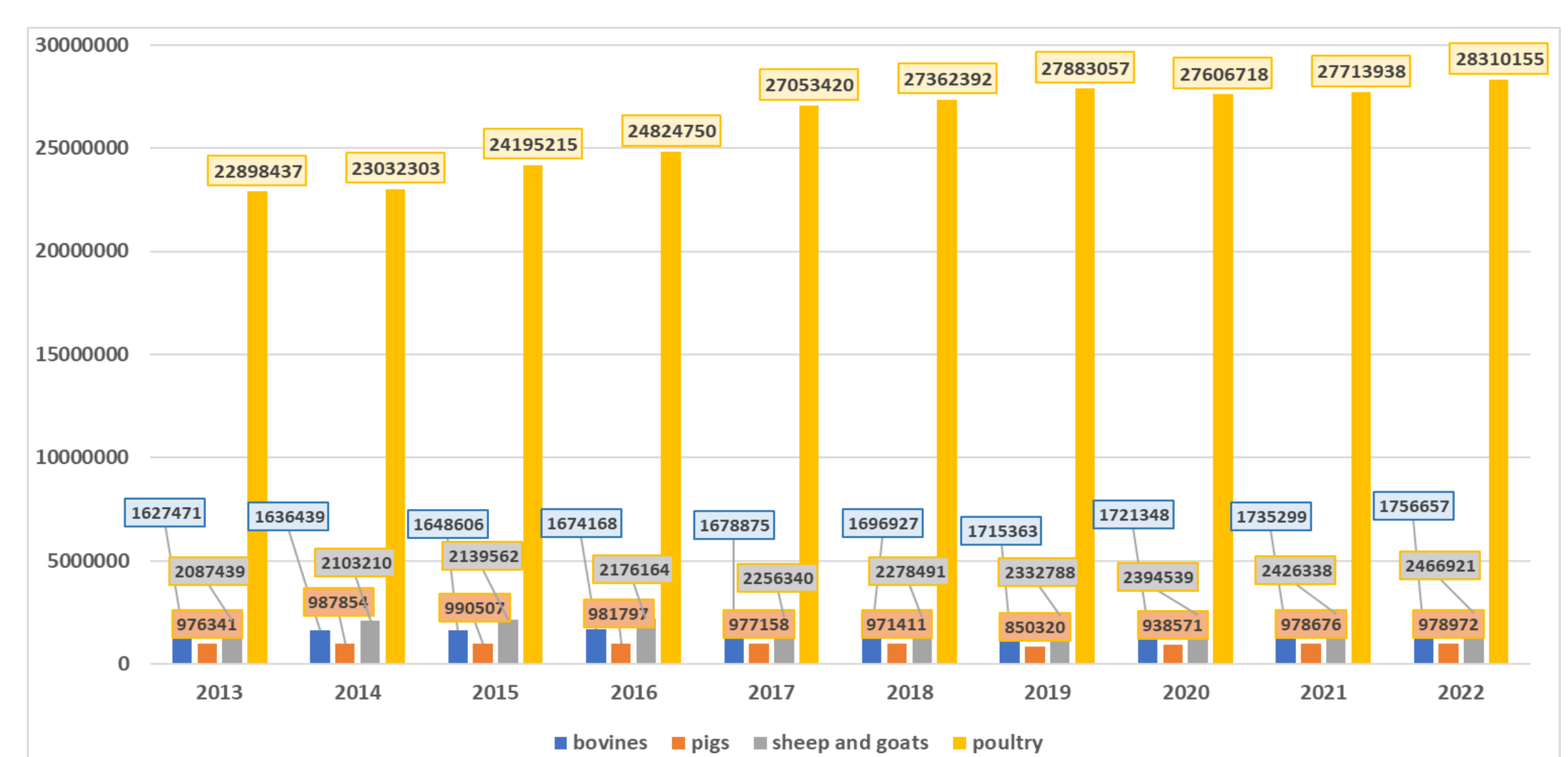
The article identified and analyzed the evolution of the areas cultivated with the main agricultural crops (cereals, potatoes, oilseeds, vegetables, fruit vineyards) that underwent changes during the period under study, the dynamics of livestock (cattle, dairy cows, pigs, sheep and goats, poultry), the values of agricultural production (crop production, animal production and agricultural services) and its structure, but also the values of the main crop crops (cereals, potatoes, oilseeds, vegetables, fruits, potatoes, grapes) and the values of the main products of animal origin (total meat, pork, milk, eggs).

The data explored by the authors were collected from the Statistical Yearbook of Romania, 2014-2024, along with works and articles from the specialized literature. Based on the information collected, the authors of the article performed their own analyses, calculations and interpretations, created the tables and diagrams and issued the conclusions.

### • Results and discussions



Total world production of main agricultural products, 2014-2022 (thousand tons)



Evolution of the number of animals worldwide (thousands of heads)

### • Conclusions

The story of agriculture is intertwined with human history and evolves with it. As we study the complexity of food production, we decipher the diverse agricultural systems and their implications that are crucial in promoting a sustainable future. The study of agriculture reflects the ongoing quest to innovate and adapt to ecological and economic change.