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TOWARDS SUSTAINABLE PASTURES: FORECASTING ORGANIC BOVINE LIVESTOCK IN ROMANIA ALONGSIDE EUROPEAN UNION TRAJECTORIES

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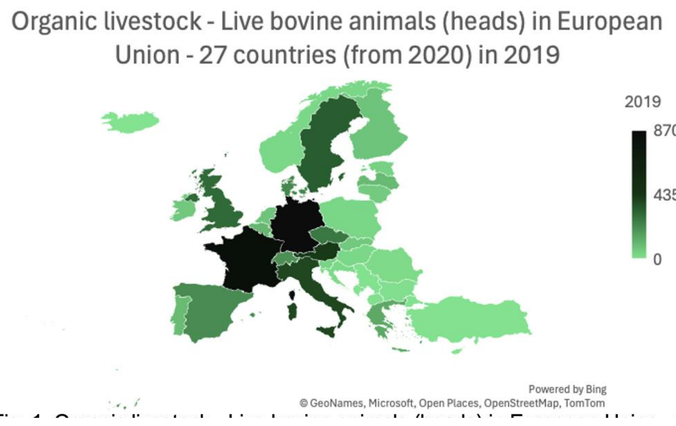
Abstract: *This study examines the contrasting trajectories of organic bovine livestock production between the European Union (EU) and Romania. While the EU-27 demonstrates a promising upward trend in organic livestock production, Romania's forecast depicts a contrasting decline over the forecasted period. This disparity underscores the imperative for targeted strategies and interventions to fortify the organic farming sector within Romania and bridge the gap with EU averages. The projected growth in organic livestock production highlights the escalating consumer demand for organic products and underscores the pivotal role of policy initiatives and technological advancements in driving sectoral growth. Our findings aim to contribute to the discourse on sustainable agriculture by illuminating the trajectories of organic bovine livestock production in Romania and the EU, providing valuable insights for policymakers, researchers, and stakeholders to foster a resilient and environmentally conscious agricultural landscape.*

Introduction

Organic livestock farming is increasingly central to sustainable agriculture, promoting reduced reliance on synthetic chemicals and enhancing biodiversity and animal welfare. In Romania, a notable transition towards these practices underscores a commitment to sustainable development, leveraging the country's rich agricultural heritage.

Materials and methods

- *Data Collection:* We utilized EUROSTAT data on organic bovine production across 27 EU countries from 2013 to 2019, with no data available post-2019.
- *Forecasting Techniques:* Our forecasting employed Microsoft Excel, utilizing time series analysis, moving averages, and exponential smoothing, supported by statistical measures for accuracy.
- *Validation:* Forecasts were validated by comparing them against historical data, adjusting models based on discrepancies to improve accuracy.
- *Limitations:* The study faces limitations such as data incompleteness, reliance on historical trends, and potential biases in forecasting models**.**



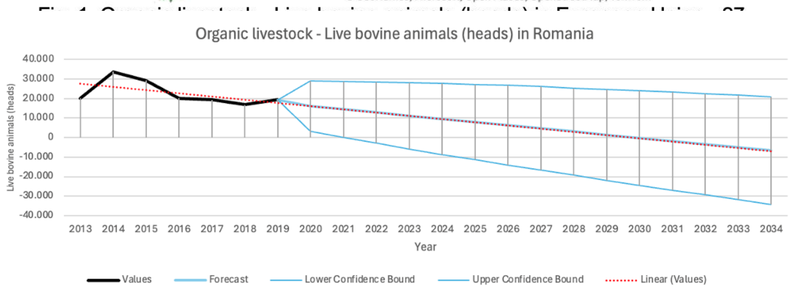
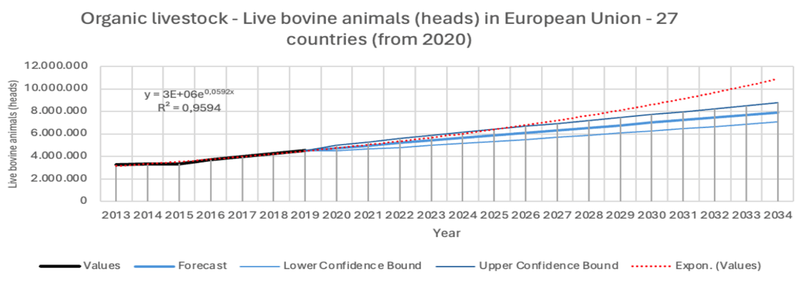


Fig. 2. Organic livestock - Live bovine animals (heads) in Romania

Results and discussions

- ***Growth Trends Across EU***: Various EU countries show different growth patterns in organic bovine livestock, with consistent increases in Belgium and Germany and a stabilization in Bulgaria after initial growth.
- ***Romania's Fluctuating Trends***: Unlike the steady growth seen in most EU countries, Romania displays fluctuating production levels in organic bovine livestock, indicating unique national challenges (Fig.2).
- ***Forecasting Disparities***: Projections suggest a continuing increase in organic bovine livestock across the EU, contrasting with a forecasted decline in Romania (Fig.3).
- ***Implications for Policy and Strategy:*** These varying trends underscore the necessity for Romania to develop targeted strategies to realign with broader EU organic farming practices and growth.
- ***Potential for Development***: Romania holds considerable potential for organic farming growth by aligning with EU standards and enhancing sustainable practices and market access.



Fig, 3. Organic livestock - Live bovine animals (heads) in European Union - 27 countries (from 2020)

Conclusions

- While the EU-27 shows an upward trend in organic livestock production, Romania's forecasted decline highlights the need for targeted interventions to strengthen its organic farming sector and align with EU averages.
- The growth in EU organic livestock production reflects rising consumer demand and the crucial role of policy initiatives and technological advancements in driving sectoral growth.
- Despite positive trends, economic fluctuations, regulatory changes, and environmental variability pose significant risks to the sustainability and resilience of organic farming practices..

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