

DIFFERENTIATION IN THE PRODUCTION AND ECONOMIC PERFORMANCE OF FARMS IN THE EU

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Abstract

In EU countries, the main producers of agricultural products are farms. In 2020, there were around 9.1 million farms in the EU-28, two thirds of which were less than 5 hectares in size. Farms in the EU used 157 million hectares of land for agricultural production in 2020, 38% of the total land area. In European countries, the number of farms tends to decrease, with the number of farms declining by 3-6% each year. In general, there are three distinct groups of farms in the EU: (1) subsistence farms, where the focus is on growing a high proportion of food to feed farmers and their families; (2) small and medium-sized farms, which are generally family-run businesses; and (3) large farms, which are more likely to be legal or cooperative. According to the European Parliament policy the aim of the paper will be to analyze EU farms according to their size, production and economic differences. An important outcome indicator of farm activity is income. Supporting farm incomes is one of the key objectives of the Common Agricultural Policy (CAP), which is defined in the Treaty of Rome as "ensuring an adequate standard of living for farmers".

Keywords: farm, farms, production, economic performance, farm income, EU common agricultural policy

1. INTRODUCTION

Solving the current problems of agricultural income is one of the main tasks of the current agricultural policy of the EU. Income is an important result indicator of the activity of the farm economy. Farm income support is one of the key objectives of the Common Agricultural Policy (CAP), which is defined in the Treaty of Rome as "ensuring an adequate standard of living for farmers" (European Parliament, 2004). The EU is one of the three largest producers of agricultural products, but agriculture has a relatively small share in the EU-27 economy, accounting for only 1.1% of GDP, around 2.0% of value added and 5.1% of employment. The share of agricultural workers has decreased from 40% of the labor force to 27% of the total turnover of the world's labor force. These shares differ in individual EU member states. The largest share of agriculture in GDP is in Bulgaria and Romania, where the share of agriculture represents 3.8% and 5.4% of GDP (Tangermann-Cramon-Taubadel, 2013).

By the Hannah Ritchie, Pablo Rosado and Max Roser (2023) we state that agricultural production is not only fundamental to improving nutrition, but is also the main source of income for many. Increases in crop production are key to ending hunger, as well as economic and social development.

Policies for the Future of Farming and Food in the European Union applies the OECD Productivity, Sustainability and Resilience (PSR) analytical framework along with the latest data from the OECD Agri-Environmental Indicators to benchmark the sustainable productivity performance of the EU's agricultural sector and to identify the main challenges ahead. ambitious data and digitalization strategy and bringing innovation to the center of the agricultural policy (OECD, 2023).

Common Agricultural Policy according to Vincent Chatellier and Hervé Guyomard (2023) direct aids are playing an essential role in supporting the income of many European farmers. This situation, the result of political choices made during successive reforms of the policy since 1992, raises the question of the appropriateness of the CAP as a means of supporting agricultural income. If direct selling is considered an innovation, we first identify the factors, such as characteristics of farmers and their farm,

determining its adoption. While establishing the link between such an innovation and performance, we study the impact of direct sales on farms' sustainability, inspired by the IDEA method.

Reconciling agrifood productivity, sustainability and resilience is a challenge common to all countries, while also unique to a country's specific context and objectives. Following an evidence-based analysis and an international comparison of performance indicators, PSR reviews offer customized recommendations that aim to improve agriculture and food systems policies. The European Union's diverse agrifood sector is at a critical juncture, confronting climate change and successive global crises while addressing the triple challenge facing food systems: ensuring food security and nutrition, providing livelihoods for actors in the food chain, and improving environmental sustainability. The EU Common Agricultural Policy (CAP) is also at a crossroads, increasingly expected to deliver on broad food systems objectives that go beyond the agricultural sector (OECD, 2023).

Robert Finger and Nadja El Benni (2021) are holding the opinion, that viable farm households contribute to the resilience of agricultural and food systems. Farm income is a policy-relevant proxy for this viability. Here, we address three key aspects of farm income: first, the *income issue*, focusing on (average) income levels; second, the *variability issue*, focusing on income risks faced by farmers; and third, the *inequality issue*, focusing on the heterogeneity and (in-)equalities of farm incomes.

2. MATERIALS AND METHODS

As the basic income support mechanism for sustainability is decoupled from production, payments are not tied to actual production in the area. The decoupling of income support was introduced through successive reforms designed to break the link between support for farmers and the type (and quantity) of products they produce. The unbundling of payments made the EU agricultural sector more market-oriented, allowing farmers to focus their production on market demand. At the same time, the provision of full income support is more conditional on compliance with some special requirements, especially those related to environmental protection and animal welfare (BISS, 2023).

3. RESULTS

The incomes of European agricultural enterprises are still much lower and less stable than in other sectors of the economy. In the EU 27, the gross income of farmers in 2020 was on average 53% of the average wage in the EU. In 2023-2027, decoupled income support is a key element of the CAP policy and almost 78% of income support (in the form of direct payments) is to be paid out through decoupled payments (BISS, 2023).

Basic income support acts as a safety net by guaranteeing a minimum level of income for all active farmers. Basic income support therefore plays a key role in ensuring food security in Europe. In addition, improving the fairness, efficiency and effectiveness of direct payments is one of the key priorities of the CAP for 2023-2027 (BISS, 2023). Arable land and pastures set to decline marginally the overall amount of agricultural and forest land in the EU is forecast to remain stable at 322.4 million ha in 2035. The stability in the land area covered with income support in the current CAP (2023-2027) compared with the previous programming period does not trigger any shifts in land use. Despite this overall stability, relative changes could occur in the share of land under different types of land use. The area given to arable crops and permanent grassland is expected to decline (by -1 and -0.7 million ha respectively between 2023 and 2035), while the area given to permanent crops and fodder (e.g. silage maize and temporary grassland) will be roughly stable (growing by only +0.1 million ha each). The relative lack of change in land dedicated to permanent crops is expected to be driven by new plantations with more efficient production systems replacing older plantations. The volatile competitiveness of EU arable crops and growing water scarcity both act to disincentivize any extension of the area. Permanent grassland and fodder areas could decline only marginally between now and 2035 as an expected extensification of animal production may somewhat counteract the reduction in dairy and beef herds across the EU (European Commission, 2023).

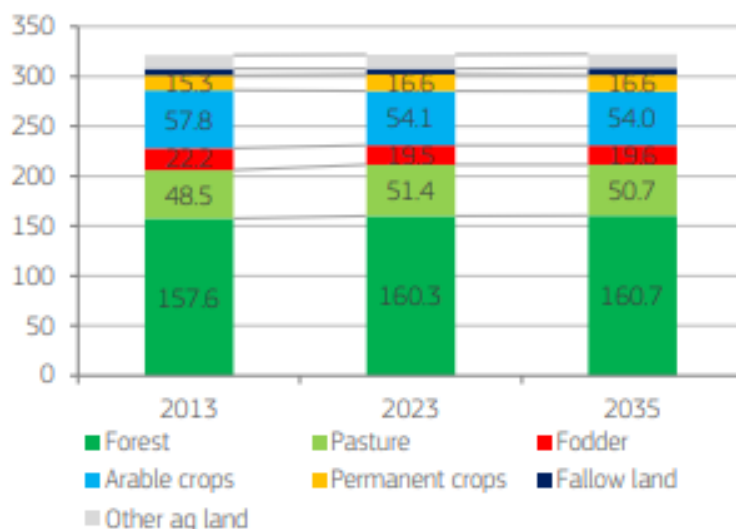


Fig. 1. EU agricultural and forest area (million ha)

Source: European Commission, 2023

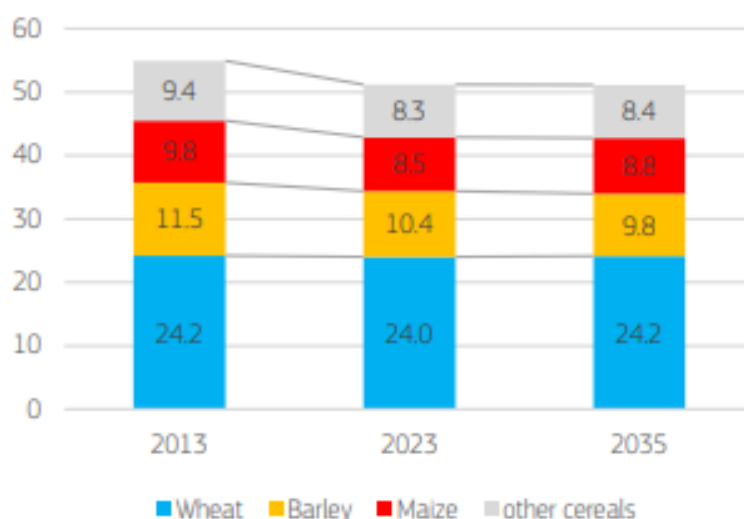


Fig. 2. EU cereal area (million ha)

Source: European Commission, 2023

The EU dairy sector is proving its resilience. The EU's milk and dairy sector showed remarkable resilience in the last few years when many significant disturbances tested the sector. The COVID-19 pandemic caused changes in the demand for dairy products, globally. Furthermore, geopolitical tensions have led to increasing input costs (energy, feed, fertilizers, transport), high food-price inflation that exceeded the level of general inflation in most EU countries, and high interest rates, which negatively affect the investments often required for productivity improvements. In some EU countries, the dairy sector is also challenged by long-term structural problems, difficulties with generational renewal, and a lack of workers. At the same time, there is increasing policy and legislative pressure for a greater contribution from the livestock sectors to reach ambitious national and EU-wide environmental objectives, and to further increase animal welfare standards. Despite the above difficulties, EU milk deliveries steadily increased in the last decade, and the EU preserved its position as a world-leading dairy exporter. The increase in yields is also expected to continue in the coming years albeit at a slower

pace than in the past. Many of the drivers that have led to a highly specialized and efficient EU dairy production system are either reaching a tipping point (for example, the closure of the productivity gap between the EU countries has slowed down) or could be counter-balanced by new drivers (for example, extensive, low-input, organic and other alternative livestock production systems that would limit growth in average milk yields) (European Commission, 2023).

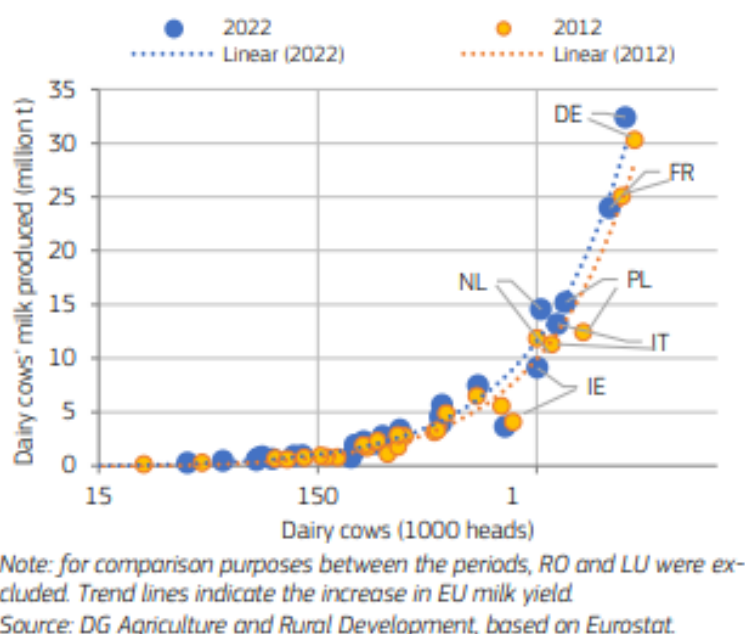


Fig. 3. Productivity increase by EU countries between 2012 and 2022

Source: European Commission, 2023

EU beef production and consumption will continue to fall. EU beef production is expected to continue declining and will fall by 0.6 million t by 2035 (-9.2 % compared with the 2021-2023 average). At the same time, the EU cow herd is set to decrease by 3.4 million heads over this period (-11%). The dairy herd should decline progressively while the suckler cow herd is set to decrease to 9.5 million heads by 2035 (-900 000 heads or -8.6 % compared with 2021-2023), due to low profitability and a stricter regulatory framework, in particular on environmental aspects. However, this decline may hide opposing developments in EU countries. Coupled income support and certain eco-schemes under the new CAP, together with a relatively favorable price outlook will only slow down this declining trend, not reverse it. The average slaughter weight is expected to continue its slightly upward trend thanks to better feed and herd management, and a larger share of beef-type animals in the productive herd. However, a shift to organic and more extensive production systems may partially counteract this trend. EU beef consumption decreased in 2023 because of high prices, low EU supply in addition to a growing negative perception due to sustainability concerns. This downward trend is likely to be sustained. As a result, by 2035, per capita beef consumption may drop from 10 kg per year to 9.5 kg per year (-6.9 %) (European Commission, 2023).

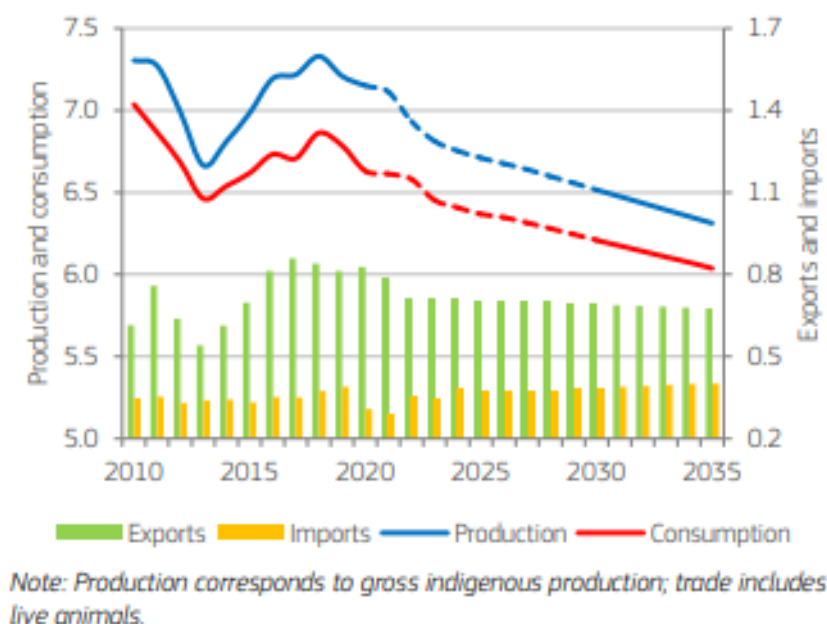


Fig. 4. EU beef and veal market balance (million t)

Source: European Commission, 2023

Although the size of EU agricultural land remained quite stable between 2005 and 2020 (growing by only +0.3%), the number of farms in the EU declined by 4.6 million (to 9.1 million farms in 2020). More than half of the EU's agricultural land (52%) was in 2020 managed by farms larger than 100 ha (around 4% of all farms), with small farms (below 5 ha) using only around 6% of total land. However, there are significant differences between EU countries. On the one hand, the greatest share of land managed by large farms (more than 100 ha) is in Czechia and Slovakia (large farms account for 86% and 89% of agricultural land respectively), corresponding to 13% and 17% of all farms (European Commission, 2023).

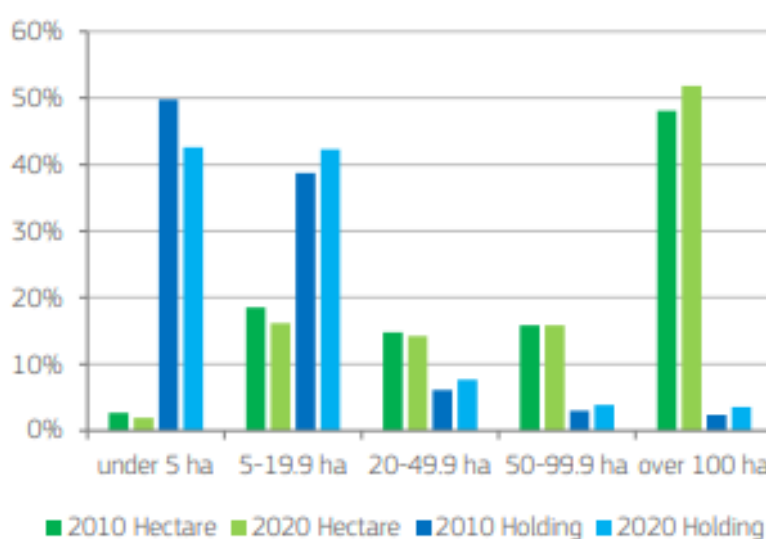


Fig. 5. Share of total hectares and number of holdings by size category of farms (2010 and 2020)

Source: European Commission, 2023

4. DISCUSSION

The incomes of European agricultural enterprises remain much lower and less stable than those in other sectors of the economy. This income disparity underscores the vulnerability of farmers and highlights the importance of targeted income support mechanisms like the CAP. However, despite these support measures, the agricultural sector faces ongoing challenges that affect income stability, such as market volatility, environmental regulations, and shifting consumer preferences.

One critical aspect that warrants attention is the impact of environmental and animal welfare regulations on farm income. While these regulations are crucial for sustainable farming and ethical practices, they can also increase production costs. Balancing these regulations with economic viability is a complex challenge for policymakers and farmers alike. Moreover, the shift towards more sustainable and organic farming practices, though beneficial in the long term, may initially result in lower yields and higher costs, further affecting income stability.

The decline in the number of farms, particularly small farms, raises concerns about the consolidation of agricultural land and the potential loss of rural livelihoods. This trend could lead to decreased biodiversity, loss of traditional farming practices, and increased socio-economic disparities between regions. Encouraging young farmers to enter the agricultural sector is essential for its sustainability. This requires not only financial incentives but also access to land, education, and technological resources.

The resilience of the EU dairy sector amidst numerous challenges indicates the potential for other sectors to adapt and thrive. However, the long-term sustainability of such resilience depends on continued innovation, investment in technology, and supportive policy frameworks that address both economic and environmental goals.

5. CONCLUSIONS

The EU agricultural sector faces multifaceted challenges, demanding nuanced policy responses to ensure its sustainability and resilience. While the Common Agricultural Policy (CAP) has been pivotal in supporting farm incomes, ongoing evaluation and adaptation are essential to meet evolving needs.

Future policy directions must prioritize balancing market orientation with sustainability goals. This involves decoupling income support from production while implementing robust environmental regulations to address climate change, biodiversity loss, and water scarcity.

Diversification, particularly through agrotourism and renewable energy projects, can mitigate market volatility and enhance economic resilience. Digital and precision agriculture technologies offer opportunities for improving productivity and efficiency, but policies must ensure equitable access.

The decline in the number of farms, particularly small farms, raises concerns about the consolidation of agricultural land and the potential loss of rural livelihoods. This trend could lead to decreased biodiversity, loss of traditional farming practices, and increased socio-economic disparities between regions. Policies must address these issues by supporting the viability of small farms and ensuring that land consolidation does not undermine the socio-economic fabric of rural communities.

Promoting generational renewal, gender balance, and the viability of small farms are critical for the sector's future. Environmental and animal welfare regulations must strike a balance between sustainability and economic viability, with incentives to support compliance.

In conclusion, sustaining a fair and stable income for farmers is foundational for food security, rural development, and environmental stewardship. By embracing innovation, inclusivity, and sustainability, the CAP can guide the EU agricultural sector towards a prosperous and resilient future.

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