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FARM STRUCTURE IN UKRAINE: ANALYTICAL REVIEW IN THE CONTEXT OF EUROPEAN INTEGRATION

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About the project "German-Ukrainian Agricultural Policy Dialogue" (APD)

The project "German-Ukrainian Agricultural Policy Dialogue (APD)" has been implemented with the support of the Federal Ministry of Agriculture, Food and Regional Identity (BMLEH) since 2006 and is currently being implemented until 2025 at its request through the executor of GFA Consulting Group LLC, as well as a consortium consisting of IAK Agrar Consulting, Leibniz Institute for Agricultural Development in Transition Economies and GOPA AFC GmbH.

The recipient of the project is the National Association of Agricultural Advisory Services of Ukraine "Dorada". The beneficiary of the project is the Ministry of Economy, Environment and Agriculture of Ukraine.

The project should support Ukraine in the areas of sustainable agriculture, efficient processing industry and international competitiveness in accordance with the principles of market and regulatory policies taking into account the development potential that arises under the Association Agreement between the EU and Ukraine. To meet this goal, the Project should provide information on German experience, as well as international European experience in development of agrarian and forestry policy framework, as well as on the organization of relevant agrarian and political institutions.

German-Ukrainian Agricultural Policy Dialogue

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1. Introduction and current situation

Ukrainian agriculture is undergoing a difficult period of transformation, defined simultaneously by the ambitious goals of EU integration and the challenges of war.

The agricultural sector has demonstrated unprecedented resilience, maintaining its role as a strategic driver of the Ukrainian economy despite significant war-related losses. The full-scale Russian invasion has inflicted damages exceeding USD 80 billion on the sector, including USD 10.3 billion in direct losses from destroyed assets. Up to 30% of farmland (around 5 million hectares) has become inaccessible due to mining and occupation. Annual agricultural output declined by more than 40% between 2021 and 2024, falling to USD 33 billion. Actual sown area under crops in 2024 totaled 23.3 million hectares, which is 18% less than the sown area in the pre-war year 2021.

Despite these losses, the sector has remained a key global food supplier. In 2024, agricultural exports reached USD 24.5 billion, accounting for 59% of Ukraine's total merchandise exports (compared with 40% in 2021). This underlines the sector's growing importance amid declining exports from other industries, particularly metallurgy.

However, these export achievements should not obscure the deep structural problems that have accumulated under the pressure of war. In 2024, agriculture made the largest negative contribution to GDP growth (-7.3% year-on-year). By contrast, manufacturing grew by 6.0%, while construction rose by 16.2%. Overall, agriculture contributed 13.7% to GDP in 2024—0.4 percentage points less than in 2021.

This decline, particularly against the backdrop of growth in other sectors, signals the exhaustion of the agricultural sector's inertia. During the first years of the war, the industry sustained itself through pre-war resources and logistical adaptation, but this "buffer" is running out. Physical depreciation of machinery, soil degradation, chronic underinvestment, and persistent security risks are creating mounting pressure. Recovery to pre-war levels is impossible without substantial investments in critical areas: demining and restoring farmland, rebuilding infrastructure, purchasing new machinery and technologies, and supporting innovation. Without such investments, the sector risks sliding into stagnation or even further decline, with serious consequences not only for Ukraine's food security but also for global markets.

The sector's social importance remains critical: it provides up to 15% of employment in Ukraine (2.3–2.5 million people) and underpins the stability of rural areas. Yet the demographic context adds further challenges: the rural population declined by 22% (or 3.5 million people) between 2001 and 2021, and the war has accelerated this process. Rapid aging and youth migration threaten the sector's long-term resilience, while labor shortages are already one of the most acute problems. These demographic trends significantly complicate the implementation of EU integration requirements.

At the same time, Ukraine's EU candidate status (granted in June 2022) and the launch of accession negotiations in June 2024 impose the task of deep structural adaptation to the standards of the EU Common Agricultural Policy (CAP). A key challenge lies in restructuring the system of state support. The CAP places considerable emphasis on small and medium-sized farms and on environmentally friendly practices. Under CAP 2023–2027, at least 10% of direct payments in EU member states must be allocated to supporting small and medium-sized farms, and 65% of CAP beneficiaries are farms of up to 10 hectares.

It remains unclear to what extent this approach can be adapted to Ukraine's conditions, as the structure of agricultural enterprises differs significantly from that of the EU. In Ukraine, (small) rural households produce about one third of output, while enterprises (with an average size of 485 hectares) account for over two thirds. In addition, there are large enterprises operating tens of thousands of hectares.

Understanding the structural specifics of Ukraine's agriculture is therefore crucial for successful EU integration and post-war recovery. The heterogeneity of economic actors—from large agricultural companies to small households—requires a differentiated approach to development policy. At the same time, a thorough analysis of the Ukrainian farm structure matters not only for designing effective policy measures but also for broader strategic reasons:

- First, it ensures a more comprehensive understanding of the market by all stakeholders, including businesses, government, and international partners.
- Second, it enables higher-quality research with appropriate sample stratification, avoiding distorted conclusions and allowing tailored recommendations for different categories of producers.
- Third, it creates the basis for a fairer and more transparent distribution of resources and support programs.
- Finally, it opens opportunities for better integration of Ukraine's agricultural sector into European and global value chains, based on the in-depth understanding of the real strengths and weaknesses of each structural segment.

Ukraine's future agricultural policy must balance the requirements of EU integration—supporting small and medium-sized farming—with the reality of large-scale enterprises dominating export-oriented production. Finding this balance between the production scale of large farms and the social function of small producers will determine the success of sectoral transformation. The design and implementation of recovery and support investment programs should become catalysts for structural changes aimed at creating a more balanced and EU-compatible agricultural system.

In this context, the present study aims to conduct a comprehensive screening of economic entities in Ukraine's agricultural sector. Its objective is to establish a clear, transparent, and structured understanding of the internal organization of the agricultural sector, based on available statistical and analytical sources. The current lack of a complete and coherent understanding of the structural characteristics of Ukraine's agriculture—particularly in terms of dynamics and wartime transformations—underscores the relevance of this approach.

This study builds on the authors' long-term work in collecting and systematizing information from diverse sources. The analytical foundation is formed by official data from the State Statistics Service of Ukraine, including:

- anonymized datasets on the performance indicators of business entities engaged in crop and livestock production;
- statistics on the financial results and balance sheets of agricultural enterprises;
- data on employment and the socio-economic development of rural areas.

In addition, administrative data from relevant ministries and agencies, materials from international organizations (FAO, World Bank, European Commission), as well as the results of sociological and expert surveys conducted within related research projects, have been used.

A distinctive feature of this study is that it applies a new analytical approach to standard statistical datasets, allowing for a more comprehensive and differentiated representation of the agricultural sector. Thus, this review not only summarizes existing information but also lays the groundwork for future practical decisions in the field of agricultural policy and Ukraine's integration into the European Union.

2. Legislative framework for classifying agricultural enterprises

The issue of defining and classifying agricultural producers by size is not merely technical but strategic for developing Ukraine's agricultural sector. How we delineate small, medium, and large producers—and assess their competitiveness—shapes the allocation of state support, access to credit, participation in international technical assistance programs, and other important aspects.

Above all, establishing clear classification criteria for agricultural producers is fundamental to designing effective public policy for the sector and enabling successful EU integration.

However, despite agriculture's major role in the national economy, Ukraine has not developed a dedicated classification specifically for agricultural producers. Agribusinesses have been classified under general criteria applicable to all business entities, which reflect sectoral specifics rather poorly.

2.1. Evolution of legislative approaches

For many years, the basis for determining enterprise size in Ukraine was the Commercial Code of Ukraine (Article 55)[1], which divided business entities into micro, small, medium, and large.

Classification criteria for business entities under the Commercial Code of Ukraine (valid as of January 2025)

Enterprise category	Number of employees	Annual income
Micro	≤10	≤ EUR 2 million
Small	≤50	≤ EUR 10 million
Medium	entities not included in other categories	–
Large	>250	> EUR 50 million

Source: https://zakon.rada.gov.ua/laws/show/436-15/ed20250228#Text

This classification, while drawing on EU approaches, did not include a "balance sheet total" criterion. In addition, in Ukraine, enterprises with annual income below EUR 50 million but more than 250 employees (or vice versa) were assigned to "medium," whereas in the EU such entities would be "large."

Since 2018, even though the Commercial Code criteria remained in force, the *de facto* "primary" legal act in this area has become the Law of Ukraine "On Accounting and Financial Reporting in Ukraine." This Law expanded the criteria to classify enterprises as micro, small, medium, or large.

According to Article 2 of the Law "On Accounting and Financial Reporting in Ukraine," three core indicators for enterprise classification are used:

- balance sheet total (i.e., total assets),
- net revenue from sales (of goods and services),
- average number of employees.

To assign an enterprise to a category, at least **two of the three** criteria must be met simultaneously.

[1] Repealed pursuant to Law No. 4196-IX of 9 January 2025.

Classification criteria under the Law of Ukraine "On Accounting and Financial Reporting in Ukraine"

Enterprise category	Number of employees	Annual income	Balance-sheet value of assets
Micro	≤10	≤ EUR 0,70 million	≤ EUR 0,35 million
Small	≤50	≤ EUR 8 million	≤ EUR 4 million
Medium	≤250	≤ EUR 40 million	≤ EUR 20 million
Large	Values exceed at least 2 of the 3 criteria of medium-sized enterprises		

Source: https://zakon.rada.gov.ua/laws/show/996-14/ed20240903#Text

The enterprise category is determined for two consecutive years. If, for two years in a row, an enterprise no longer meets a category's thresholds in its annual financial statements, it moves to the corresponding new category.

In August 2025, the Verkhovna Rada (the Ukrainian Parliament) proposed significant amendments that could lead to a substantive shift in how agricultural producers are categorized. Under the draft law "On Amendments to Certain Laws of Ukraine Regarding the Organizational Principles of Support in the Agricultural Sector" (registration No. 13202-1 of 7 May 2025), the criteria for determining enterprise categories are to be updated.

A key innovation is a unified definition of "farmers" (Clause 2.42 of the Law), covering all agricultural producers:

"Farmers are natural or legal persons, including agricultural producers, such as farmers' enterprises, associations of natural or legal persons, regardless of the legal form of organization of such associations and the status of their members, that have facilities on the territory of Ukraine where they conduct agricultural activities."

The draft law establishes a new, adapted three-tier classification:

1. **Small agricultural producers** (Clause 2.37): farmers meeting **micro-enterprise** criteria:
   - annual income up to **EUR 700,000** (approx. UAH 30 million in 2024),
   - assets up to **EUR 350,000** (approx. UAH 15 million),
   - up to **10** employees.
2. **Medium agricultural producers** (Clause 2.38): farmers meeting **small-enterprise** criteria:
   - annual income **EUR 700,000–8 million**,
   - assets **EUR 350,000–4 million**,
   - **10–50** employees.
3. **Large agricultural producers** (Clause 2.39): farmers meeting **medium or large-enterprise** criteria:
   - annual income **over EUR 8 million**,
   - assets **over EUR 4 million**,
   - **more than 50** employees.

Introducing such a dedicated classification for agricultural producers pursues several important outcomes. First, it aims to enable a fairer distribution of state support—separate programs can be designed for each category. Second, the new classification is integrated with the State Agrarian Register, automating support delivery and reducing corruption risks. Third, unified terminology can facilitate cooperation with international partners and donors, who will now have clearer criteria for identifying program beneficiaries.

2.2. Informal sectoral approaches and practical classifications

Segmentation by land area. Alongside official classifications, Ukrainian agribusiness relies on a well-established informal practice of classifying enterprises by the size of land area used, which is widely employed by experts, analysts, and market participants. This approach better captures the sector's real economic structure and the business models of different producer types.

Types commonly used in practice are as follows:

- **Small enterprises**: land area up to **150–200 ha**, and in some cases up to **500 ha**. Typically oriented to local and regional markets; characterized by higher labor intensity and diversified production.
- **Medium enterprises**: **200 (500)–10,000 ha**. Combine elements of intensive and extensive production, serve domestic and export markets, and have greater capacity to invest in machinery and technology.
- **Large enterprises**: **over 10,000 ha**. Dominate export production of major crops, actively deploy modern technologies, and access international capital markets.

Notably, this informal classification often reflects Ukrainian agricultural realities more accurately than official criteria based on financial metrics. Land area correlates more closely with production capacity, logistics, and market position under Ukraine's specific conditions.

Land criteria in agricultural legislation. Land legislation—particularly Law No. 552-IX of 31.03.2020 "On Amendments to Certain Legislative Acts of Ukraine Concerning the Circulation of Agricultural Land"—creates additional frames for classifying land users.

The Law establishes the following phased restrictions on land concentration:

- **Until 1 January 2024**, the total area of agricultural land owned by a citizen of Ukraine could not exceed **100 hectares**. Currently, the total area of agricultural land that may be owned by a citizen of Ukraine **may not exceed 10,000 hectares**.
- **Until 1 January 2024**, the purchase, sale, or any other transfer of ownership of agricultural land intended for commercial agricultural production **to privately owned legal entities** was prohibited. Currently, **legal entities may acquire ownership of commercial agricultural land**, but not exceeding **10,000 hectares**.

These legal provisions effectively established a gradation of landowners by the size of their land holdings and defined the legal boundaries for **small-, medium-, and large-scale land ownership**.

2.3. Classification by legal forms of organization

Understanding the legal forms of organization of agricultural operations in Ukraine is essential for systematic sector analysis and sound policymaking. Each form has distinct legal regulation, operational features, and varying statistical coverage—factors that affect the quality of structural assessments. In what follows, we present existing legal forms of agricultural producers as per Ukrainian legislation.

<u>**Personal peasant farms (PPFs) — *osobyste selianske hospodarstvo, OSH***</u>

A personal peasant farm is a form of economic activity carried out without establishing a legal entity by an individual (or family members living together). The primary purpose is to meet personal needs through the production, processing, and consumption of agricultural products, with the sale of surpluses and provision of services using PPF assets.

Key characteristics of PPFs:

- no status of a legal entity;
- operated by the personal labor of rural household members without contracted hired labor;
- activity is **not** considered entrepreneurial;
- subject only to registration with the local village/settlement council at the land plot's location;
- exempt from income tax on land up to **2 ha** (subject to certain additional eligibility criteria).

As of **1 January 2022**, **3.9 million** PPFs were registered in Ukraine, holding or using **6.1 million ha** of land.

Households (*domohospodarstva naselennia*)

Households encompass a broad category of the rural population, which, according to the Law of Ukraine *"On the Agricultural Census,"* represents a group of individuals who live together, provide themselves with everything necessary for daily life, and maintain a joint household. It is important to emphasize that the term *"household"* does not necessarily imply the use of land plots for personal farming (private subsidiary farming). It is a broader concept than *personal peasant farms (OSH)* and may include households that own agricultural land but do not have formal OSH status, or even those not engaged in agricultural activity at all. Thus, *households* represent the broadest statistical unit for analyzing the rural sector, within which OSHs constitute a specific subset.

The main source of land for households was the **land reform of the 1990s**, which formed part of the broader economic reform accompanying Ukraine's transition to a market economy. Its goal was to redistribute land, transfer it into private and collective ownership, and create conditions for the development of diverse forms of farming.

The **process of land parceling and distribution of land shares** *(paiuvannia)* from collective agricultural enterprises began with the Decree of the President of Ukraine of 8 August 1995 No. 720/95 "On the Procedure for Land Parceling Transferred into Collective Ownership of Agricultural Enterprises and Organizations."

According to operational data from the State Service of Ukraine for Geodesy, Cartography and Cadaster, the **average size of a land share (parcel, *pai*)** in Ukraine is **4 hectares**, though it varies significantly by region—from 0.2 ha in western Ukraine to 5–9 ha in the south and east.

Family farms: evolution and current state

Family farms in Ukraine underwent a complex evolution over **1991–2021**, conventionally in three stages:

I. **1989–1993** — emergence during *perestroika*. The first private family farms appeared before independence (1991). The legislation that provides a legal basis for their functioning followed and included the Law "On Peasant (Farmer) Enterprises" (1991), the Law "On Forms of Land Ownership" (1992), and the new Land Code (1992).

II. **1993–1999** — rapid development. The new Law "On Farmer Enterprises" (1993) became the foundational act; upon state registration, family farms automatically obtained legal-entity status.

III. **1999–2021** — further reform and market adaptation, introducing the possibility to establish a family farm also **without** legal-entity status.

As a result of these developments, two main types of family farms have evolved and operated since **2017**:

1. **Farmer enterprise as a legal entity (*fermerske hospodarstvo*)** – a form of (extended) family labor relations with full legal-entity status. As of **2024**, about **20,000** economically active farmer enterprises with legal-entity status operated in Ukraine, using roughly **4.5 million ha** of agricultural land;
2. **Farmer enterprise without the status of a legal entity (*simeine fermerske hospodarstvo*)** – a form of family labor relations, whose head (founder) is registered as a sole proprietor (FOP), i.e., a natural person.

For the purpose of simplicity, we hereinafter refer to family farms with legal-entity status as **farmer enterprises**, and family farms without legal-entity status as **family farms**. Both types have distinctive features that help to differentiate between them (see the table below).

Key differences between farmer enterprises and family farms in Ukraine

Criterion	Farmer enterprise	Family farm
Legal status	An independent **legal entity** with its own rights, obligations, and liabilities	One or several individuals (members of the family) acting as individual entrepreneurs/sole proprietors (FOPs), i.e., **natural persons**
Establishment procedure	Registered as a legal entity operating based on a **founding document (statute)** that defines its internal structure and rules	Established based on an **agreement (declaration)** on the establishment of a farm, specifying the rights and obligations of its members
Form of ownership	The property of the farm is **its own** and distinct from the joint ownership of its members	The property of the farm is **jointly owned by its members**, not by a legal entity
Lliability	The **legal entity itself** is liable for its obligations with its property	**Individual members** of the farm are **personally** liable for the enterprise's debts with their property

Sources: Commercial Code of Ukraine; https://www.apd-ukraine.de/fileadmin/user_upload/Hanbuecher/ABC_ohne_yur.Person.pdf

Sole proprietors (*fizychna osoba-pidpryiemets — FOP*) in agriculture

There are also **sole proprietors** engaged in agricultural activity without a formal family-farm status. This is, thus, another category of farms available in Ukraine. Sole proprietors (or FOPs) may produce agricultural goods directly or engage in adjacent activities (processing, trade, services). Such FOPs do **not** enjoy the tax benefits available to farmers.

Under the Tax Code, a **family farm** whose head is registered as an FOP may apply for the simplified taxation system (Group 4), in particular if the land owned or used by family members is within the limits of **0.5–20 ha**[2].

Enterprises

Enterprises include legal entities of various organizational and ownership forms: limited liability companies, private enterprises, joint-stock companies, and other, predominantly corporate forms. They are the backbone of Ukraine's commercial agricultural production and are characterized by:

– full legal-entity status;

[2] Size of a landholding is just one of the criteria for simplified taxation of family farms presented here. We do not describe the other criteria to avoid complexity of presentation.

- ability to employ hired labor[3];
- orientation to market (commodity) production;
- access to credit and investment.

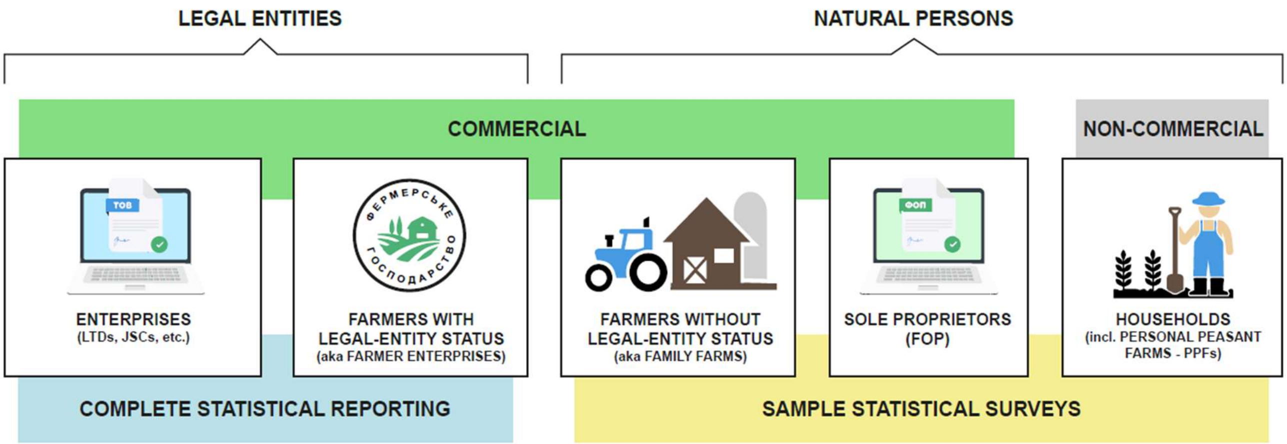
In **2024**, enterprises accounted for **57.4%** of total agricultural production.

2.4. Statistical coverage of producer categories

Statistical coverage is strongest for **legal entities**, i.e., **enterprises, including farmer enterprises**. They are subject to mandatory statistical reporting and maintain full financial accounts, ensuring high data quality and completeness.

Timely estimates for **natural persons**, i.e., **households** and **PPFs,** are generated through annual household sample surveys. The main instrument is the Household Living Conditions Survey, which includes questions on landholdings, livestock and poultry numbers, etc.

Statistical coverage of producer categories in Ukraine, by legal form of organization



Source: authors' own performance

With the onset of the full-scale Russian invasion, all field surveys were suspended, severely complicating the collection of reliable data on household and PPF activity.

FOPs are generally exempt from regular statistical reporting (with limited sectoral exceptions such as transport or industry). FOPs' agricultural output is included within the estimate of **household** production without identifying FOPs as a separate producer type. This causes methodological challenges for structural analysis.

In principle, baseline assessments of all agricultural actors should be based on **regular agricultural censuses**. Ukraine, however, has **never** conducted a full agricultural census. Each planned census year has been derailed by political, economic, or wartime *force majeure*, preventing a comprehensive and reliable picture of sector structure.

The absence of regular agricultural censuses creates a systemic gap in understanding the real structure of the sector and hampers evidence-based policy for different categories of producers.

2.5. Limitations of existing approaches

Despite evolutionary progress in broad enterprise classification, the approaches above include **no additional sector-specific criteria**. Critically, an entity's or producer's category is determined by parameters for its **overall** operations, not specifically for **agricultural production**.

[3] Farmer enterprises as legal entities may also hire labor.

For example, an enterprise may have relatively modest grain production but own a grain elevator and a trading arm with high turnover. Its total revenue would automatically place it among "large producers," even though by strictly agricultural metrics it might be "medium." Conversely, a small family farm cultivating only **20 ha** and serving local markets could operate on-farm shops whose revenue formally pushes it into the "medium producer" category.

Key sectoral documents—such as the **Strategy for the Development of Agriculture and Rural Areas in Ukraine to 2030**—declare support for small and medium producers, but likewise do **not** set specialized sector definitions for them. This creates a gap between strategic intent and practical implementation mechanisms for developing small and medium agribusinesses.

A particularly acute issue is defining "small farmer" or "family farm." According to research by the **Kyiv School of Economics[4],** at least four different definitions of small agricultural producers coexist in Ukraine:

- farmer enterprises as **legal entities** (under the Law "On Farmer Enterprises");
- family farms as **FOPs** (sole proprietors);
- **PPFs** and **households** without PPF status (natural persons without entrepreneurial, commercial status);
- other small commercial farms across various legal forms of organization.

The absence of a unified approach means the same holding can qualify as **small** under one set of criteria and **medium** under another.

As a result, a systemic problem emerges: state programs to stimulate and support development are defined by **formal** criteria that do not always match the real needs and capacities of different categories of producers.

2.6. Section conclusions

The analysis of Ukraine's legislative framework for classifying agricultural producers reveals a complex, multi-level system of criteria, each with distinct objectives and scope.

The nationwide system based on the Law "On Accounting and Financial Reporting in Ukraine" ensures universality and comparability with other sectors, yet does not fully account for the specifics of agricultural production.

Informal **land-area** classifications most accurately reflect the sector's real structure and the economic logic of different producer types, but lack formal legal status—complicating their use in public policy.

The multiplicity of criteria creates challenges in law enforcement and can lead to inconsistencies in state support for different producer categories. At the same time, this diversity reflects the objective need for differentiated regulation of a complex, heterogeneous sector.

For successful EU integration and more effective public support, further **harmonization** of classification approaches is needed, considering both national sectoral specifics and EU requirements for supporting sustainable agriculture and small and medium farming.

It is especially important to **legally enshrine criteria that reflect agricultural specifics**, notably landholding size and specialization, to enable a more targeted and effective system of state support for different categories of agricultural producers.

[4] "Assessing the role of small farmers and households in the agri-food sector of Ukraine" (2021), https://arxiv.org/pdf/2307.11683.

Analyzing the legal forms of organization of agricultural producers through the lens of their actual size reveals certain characteristic patterns. **Households** (including PPFs), **family farms without legal-entity status**, and **individual entrepreneurs (FOPs)** predominantly represent the **segment of small producers**, though there are some exceptions among family farms and FOPs. In contrast, **agricultural enterprises** and **farmer enterprises with legal-entity status** are typically **medium- and large-scale producers**, with the latter primarily concentrated in the **medium-size segment**.

Further analysis will clearly illustrate these patterns, but will also demonstrate that some widely held assumptions about the size and structure of Ukraine's agricultural producers are not consistent with reality and facts.

3. Analysis of agricultural producers: Methodological framework and structural distribution

3.1. Methodological framework for analyzing the structure of agricultural production

Understanding the structural features of Ukraine's agricultural sector is critically important for effective public policy and successful EU integration. The heterogeneity of economic actors—from large agribusinesses to small personal peasant farms and households—requires an in-depth analytical approach to assessing their roles and contributions to overall production[5,6].

To ensure a uniform assessment of the contributions made by different categories of producers to agricultural production, this study applies the methodological approaches of the State Statistics Service of Ukraine (SSSU) for evaluating production at comparable (constant) prices. In line with the *Methodological Provisions of the State Statistical Survey "Agricultural Production at Constant Prices"*, approved by SSSU Order No. 180 of 5 May 2023, calculations are carried out using a single system of indicators for all producer categories.

This methodological approach ensures:

- Temporal comparability through the use of constant prices for a base period, which eliminates the effects of inflation and allows assessment of real production dynamics;
- Cross-category consistency thanks to unified lists of agricultural products and constant prices for all regions of Ukraine;
- Aggregation capability to combine different product types into a single production indicator by producer category.

This approach is broadly aligned with Commission Regulation (EC) No 138/2004 on the Economic Accounts for Agriculture (EAA) in the Community, which sets accounting and classification standards for the agricultural sector.

At the same time, the following methodological limitations—potentially biasing the assessment of small producers' roles—must be considered:

- Partial data availability: not all small producers maintain full financial accounts;
- Territorial constraints: lack of statistical information from temporarily occupied territories or areas near active hostilities;
- Informal sector: a share of production is not captured by official statistics.

[5] https://www.apd-ukraine.de/fileadmin/user_upload/Agrarpolitische_Berichte/Bericht_Prokopenko_UA.pdf
[6] https://kse.ua/wp-content/uploads/2021/07/Smallholders-KSE.pdf

3.2. Categorization of agricultural producers

The SSSU traditionally records production under two principal categories: a) Enterprises—legal entities of all forms of organization engaged in agricultural activity, with separate estimates available for farmer enterprises as a subset of enterprises; b) Households—personal peasant farms and other forms of household-based activity by natural persons.

For this study, however, we apply an expanded three-tier classification—small, medium, and large producers—which reflects new legislative requirements and is closer to European standards.

For each producer category, we calculate:

- absolute production at constant prices by product type;
- relative indicators (share of total production, %); and
- structural indicators—i.e., the distribution of production of major crops by category.

At the same time, measuring contribution to production by producer category does not fulfill the study's objectives fully. Alongside volumes and structure, we further group producers—primarily, enterprises, due to data availability—by area of agricultural land and other criteria. This will show not only each category's production share but also how many enterprises fall into each group, their average sizes, and proportions. A separate section is devoted to the role of large integrated companies as a specific phenomenon of Ukraine's agricultural sector.

Thus, the structural analysis here covers not only the "production weight" of producer groups but also their numbers, spatial concentration, and organizational features. This enables a multidimensional understanding of Ukraine's agricultural sector—a necessary precondition for evidence-based public policy and successful EU integration.

3.3. Section conclusions

The proposed analysis of structural features will support well-grounded, differentiated policy approaches for different producer categories:

- Targeted state support: the ability to design specialized programs for small, medium, and large producers in line with their needs and roles in production;
- Harmonization with EU standards: alignment with EU Common Agricultural Policy requirements on support for small and medium holdings;
- Resource-allocation efficiency: focusing support on the most effective areas for each producer category;
- Social stability in rural areas: preserving the role of smallholders as a foundation for employment and demographic resilience in the countryside.

4. Agricultural production as a key indicator

4.1. General characteristics and meaning of the indicator

The indicator of **agricultural production** (AP) is traditionally applied to construct an aggregate picture of agricultural production, identify development trends, assess changes over time, and conduct macroeconomic calculations.

Within its statistical framework, the SSSU operates with the following indicators:

1. **AP at constant prices** – reflects the value of agricultural products produced during a given period, expressed in constant prices.
2. **AP per capita at constant prices** – indicates the level of agricultural production per resident of the de facto population.

3. **AP per 100 ha of agricultural land at constant prices** – characterizes the efficiency of land use.
4. **Index of AP** – measures the change in the physical volume of agricultural production between comparison periods.
5. **Share of AP** – reflects the share of individual product groups in total agricultural production and/or the share of agricultural production by producer categories within the total.

The above indicators are compiled by SSSU both at the national and regional levels. They are aggregated and disaggregated by the following categories of producers: all categories of producers, enterprises, farmer enterprises, and households.

A critical limitation of the current statistical methodology is the **absence of systematized estimates by farm/producer size**. Accounting only for aggregated categories—without differentiating by landholding size or other size-related criteria—precludes precise assessment of the roles of small, medium, and large producers in total production. This differentiation, however, is essential for designing a balanced agricultural development policy.

At the same time, the AP system provides a foundation for conducting such structural analysis by farm size, through combining different data sources and applying additional analytical methods. Delivering on this ambitious task is precisely the purpose of the present study.

4.2. Agricultural production in Ukraine: general estimates for 2024

4.2.1. Scale of losses from Russian aggression

The Russian invasion inflicted severe damage on Ukraine's agricultural production. In **2024**, total agricultural production amounted to **UAH 1.078 trillion** at 2021 constant prices, which is **UAH 266 billion (19.8%)** less than in pre-war 2021.

The most heavily affected branch was **crop production**, which suffered losses of **UAH 239 billion**, or **21.6%** of the pre-war level. Crop production fell from UAH 1.106 trillion in 2021 to UAH 867 billion in 2024. **Livestock production** proved more resilient, with losses of **UAH 27 billion (11.3%)**, amounting to UAH 211 billion in 2024 compared with UAH 238 billion in 2021.

The first full-scale year of war was catastrophic for the sector. In 2022, total production dropped to UAH 1.004 trillion, representing a loss of UAH 340 billion, or 25.3% of the 2021 level. Crop production was hit hardest, losing UAH 312 billion (28.2%) in a single year.

In 2023, the sector partially recovered, largely due to exceptionally favorable weather conditions that ensured a good harvest. Total production rose to UAH 1.115 trillion, but in 2024 declined again to UAH 1.078 trillion, underscoring the **absence of sustained recovery processes**.

Dynamics of agricultural production (AP) and shares of enterprises and households in AP, 2010–2024, in constant 2021 prices

	Total AP, billion UAH			Crop production, billion UAH			Livestock production, billion UAH		
	Total	**households, %**	**enterprises incl. FEs, %**	**Total**	**households, %**	**enterprises incl. FEs, %**	**Total**	**households, %**	**enterprises incl. FEs, %**
2010	882	43.6%	56.4%	632	37.2%	62.8%	249	59.9%	40.1%
2011	1 060	39.9%	60.1%	812	34.4%	65.6%	248	58.0%	42.0%
2012	1 019	41.2%	58.8%	758	35.9%	64.1%	261	56.7%	43.3%
2013	1 157	37.7%	62.3%	887	32.5%	67.5%	271	54.8%	45.2%

2014	1 183	36.7%	63.3%	914	32.0%	68.0%	269	53.0%	47.0%
2015	1 126	37.0%	63.0%	866	32.2%	67.8%	259	53.0%	47.0%
2016	1 197	35.0%	65.0%	945	30.3%	69.7%	252	52.9%	47.1%
2017	1 171	35.6%	64.4%	918	30.9%	69.1%	253	52.5%	47.5%
2018	1 267	33.4%	66.6%	1 011	28.9%	71.1%	256	51.0%	49.0%
2019	1 284	32.6%	67.4%	1 028	28.4%	71.6%	256	49.2%	50.8%
2020	1 155	34.0%	66.0%	904	30.1%	69.9%	250	48.2%	51.8%
2021	1 344	30.7%	69.3%	1 106	27.2%	72.8%	238	46.8%	53.2%
2022	1 004	33.1%	66.9%	794	30.0%	70.0%	210	44.5%	55.5%
2023	1 115	29.8%	70.2%	905	27.0%	73.0%	211	42.0%	58.0%
2024	1 078	29.0%	71.0%	867	26.5%	73.5%	211	39.1%	60.9%

Source: State Statistics Service of Ukraine

4.2.2. Impact of wartime factors on production indicators

The stagnation of agricultural production in 2024 reflects the combined impact of wartime factors extending beyond the direct destruction of assets:

- **Territorial losses and restricted land access.** Occupation and the expansion of combat zones have removed about 5 million ha of agricultural land from cultivation. This directly reduced crop production and explains the heavier losses in this branch compared with livestock.
- **Demographic crisis and labor shortages.** Mobilization, civilian casualties, and mass migration have created a critical labor deficit in agriculture. Households—traditionally reliant on family labor—were particularly affected.
- **Disproportionate impacts across producer categories.** Large enterprises proved more adaptable thanks to better access to machinery, production relocation opportunities, and financial resources. By contrast, small households suffered heavier relative losses, lacking the capacity for rapid adjustment.

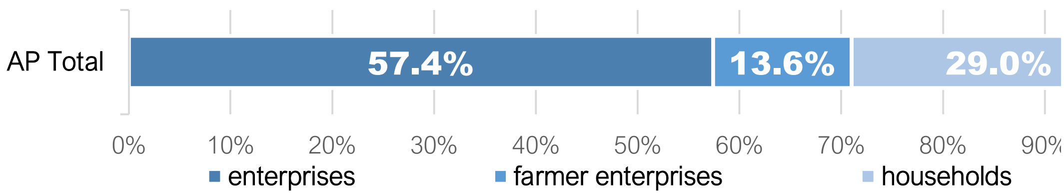
4.2.3. Structural shifts by producer category

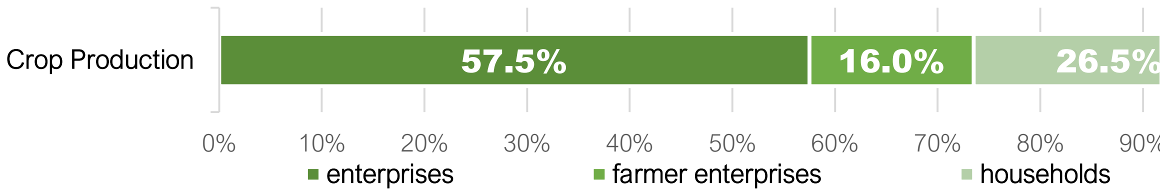
Commercial structures (enterprises and farmer enterprises) remained resilient. Together, in 2024, they provided 71.0% of total agricultural production. Enterprises dominated with 57.4%, while farmer enterprises accounted for 13.6%. Their role was especially critical in crop production, where enterprises produced 57.6% and farmer enterprises 16.0% of production.

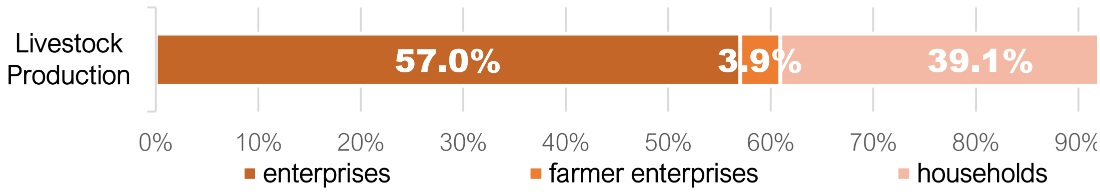
Enterprises and farmer enterprises faced total losses of UAH 166 billion (17.8% compared to pre-war 2021, when their combined share of production was 69.3%). Their relatively smaller decline reflects stronger access to technology, relocation options, and financial resources for adaptation.

Households experienced larger relative losses. In 2024, their share fell to 29.0% of total production, compared to 30.7% in 2021. In absolute terms, households lost UAH 100 billion (24.2% of pre-war production), exceeding the sector's average losses.

Structure of agricultural production (AP) by producer type, 2024 (%)







Source: State Statistics Service of Ukraine

Overall, the analysis of the 2010–2024 dynamics shows a gradual decline in the household share of total production—from 43.6% in 2010 to 29.0% in 2024. The decline is most striking in livestock production, where the share of households fell from 59.9% in 2010 to 39.1% in 2024.

4.3. Section conclusions

The war has accelerated the trend of production concentration. Demographic losses and rural outmigration, combined with the collapse of traditional household-based economic relations, create conditions for a further long-term reduction in the role of households.

With recovery capacity exhausted under conditions of ongoing war and critical labor shortages, future revival of production will require not only capital investment but also addressing the demographic crisis and rebuilding rural communities.

5. Structure of agricultural production by enterprises: A view through existing criteria

The definition and classification of agricultural producers by size is one of the key issues in shaping effective agricultural policy in Ukraine. Earlier sections examined the legislative framework establishing formal criteria for differentiating between producers. However, the practical application of these criteria for systematic analysis of the agricultural sector's structure has so far remained limited.

The diversity of approaches to defining small, medium, and large producers creates a methodological challenge: most criteria are theoretically justified but lack empirical verification of their adequacy. Each proposed approach—whether based on financial indicators, employment numbers, or landholding size—produces its own picture of the sector's structure, which may differ substantially from alternative assessments.

In this section, we present a comprehensive empirical analysis of how the structure of Ukraine's agricultural enterprises would appear if different classification approaches were applied. Two main approaches are used:

- **First,** the criteria of Draft Law No. 13202-1 *"On Amendments to Certain Laws of Ukraine Regarding the Organizational Principles of Support in the Agricultural Sector"*, which introduces an adapted three-tier classification of producers based on annual income, balance-sheet value of assets, and number of employees.
- **Second,** the well-established practice of informal classification of commercial structures, i.e., enterprises, by size of landholding, widely applied by experts and market participants, which reflects more accurately the real economic logic of different farm types.

This dual approach makes it possible not only to demonstrate how the sector's structural profile changes depending on the chosen criteria but also to assess the practical suitability of each for public policy purposes. The results show how significantly estimates of the contributions of small, medium, and large producers to overall production, their shares in land use, and their specialization by product type can vary.

It is important to note that the classification of households, not presented here, requires a separate specialized study due to their specific nature and the features of statistical accounting. Accordingly, this section focuses primarily on **fully commercial structures—corporate enterprises and farmer enterprises.**

5.1. Draft Law No. 13202-1: A new adapted three-tier classification

As already noted above, in August 2025, the Verkhovna Rada initiated important legislative changes establishing a dedicated classification specifically for agricultural producers. Draft Law No. 13202-1 introduces an adapted three-tier system intended to reflect the specifics of Ukrainian agriculture while aligning with EU standards.

At the same time, applying these criteria to actual data on Ukrainian producers yields **unexpected results**, which differ somewhat from common perceptions of the sector's structure.

Classification criteria under Draft Law No. 13202-1

Producer category by size	Number of employees	Annual income	Balance-sheet value of assets
Small	up to 10	up to EUR 0.70 million	up to EUR 0.35 million
Medium-size	from 10 to 50	from EUR 0.70 million to EUR 8.0 million	From EUR 0.35 million to EUR 4.0 million
Large	More than 50	more than EUR 8.0 million	more than EUR 4.0 million

Source: https://itd.rada.gov.ua/billInfo/Bills/CardByRn?regNum=13202-1&conv=9

5.1.1. Distribution of producers by category

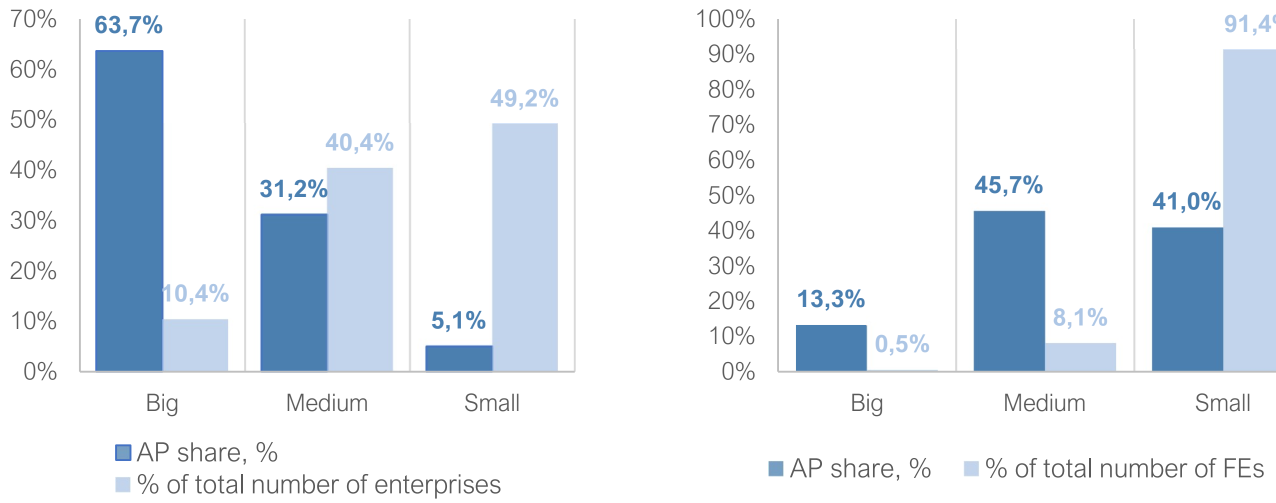
An analysis of agricultural production based on the criteria of the Draft Law highlights the **dominance of large commercial producers** in Ukrainian agriculture. According to 2024 data, large producers (both enterprises and farmer enterprises) accounted for **53.9%** of total production—an impressive figure given that they represented only **3.6% of all commercial structures**, i.e., enterprises and farmer enterprises.

The corporate sector, i.e., enterprises without farmer enterprises, displays a classic **oligopolistic structure**, where a small number of powerful players control the majority of the market. On average, each large enterprise produces **60 times more** than a small one.

The structure and contribution to production of **farmer enterprises (FEs)** differ sharply from the overall commercial segment. Although large producers are also present among FEs, they account for just **0.5% of all FE farms**, with a total contribution to agricultural production of **less than 15%**. This indicates that the FE sector remains predominantly small- and medium-scale, in contrast to the **corporate sector (enterprises excluding FEs)**, where large structures dominate.

Structure of agricultural production (AP) by producer type and size category, 2024 %*

Enterprises excl. FEs **FEs**



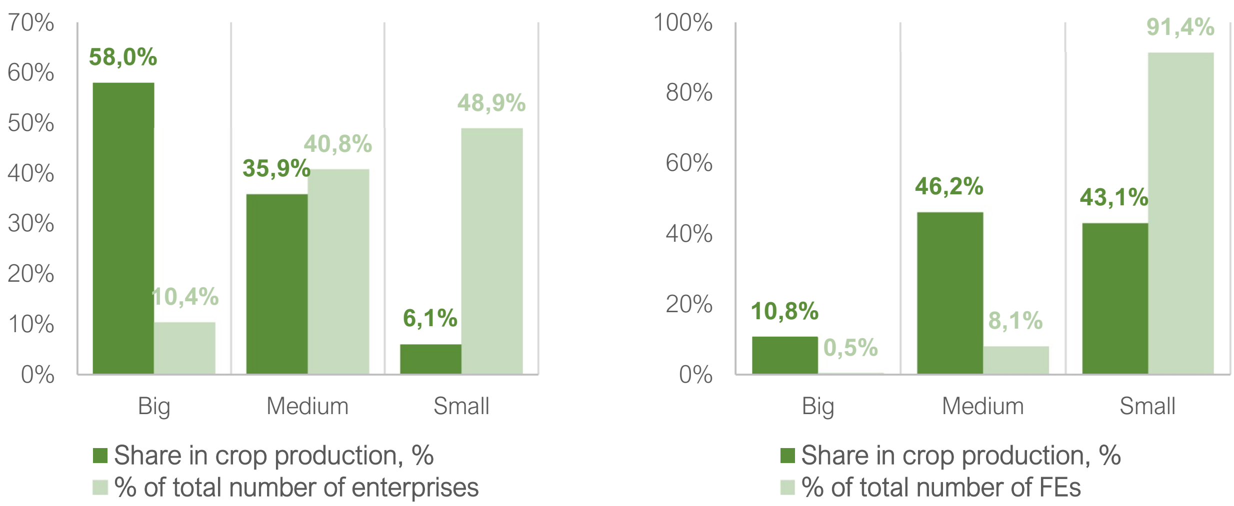
Source: State Statistics Service of Ukraine; authors' calculations

** – Hereinafter, the indicator "Agricultural output, %" refers to the contribution of the respective producer category (large, medium, small) to the total production* ***within its type****: 1) enterprises (excluding FEs), and 2) FEs. The same applies to the distribution by the total number of entities.*

In **crop production**, the distribution is relatively balanced, demonstrating the potential for all producer categories to maintain viable market niches. In 2024, small and medium producers in the corporate segment accounted for **42.0%** of total crop production. Within FEs, small and medium producers constituted the **core production force—nearly 90% of production**.

Crop production structure by producer type and size category, 2024, %

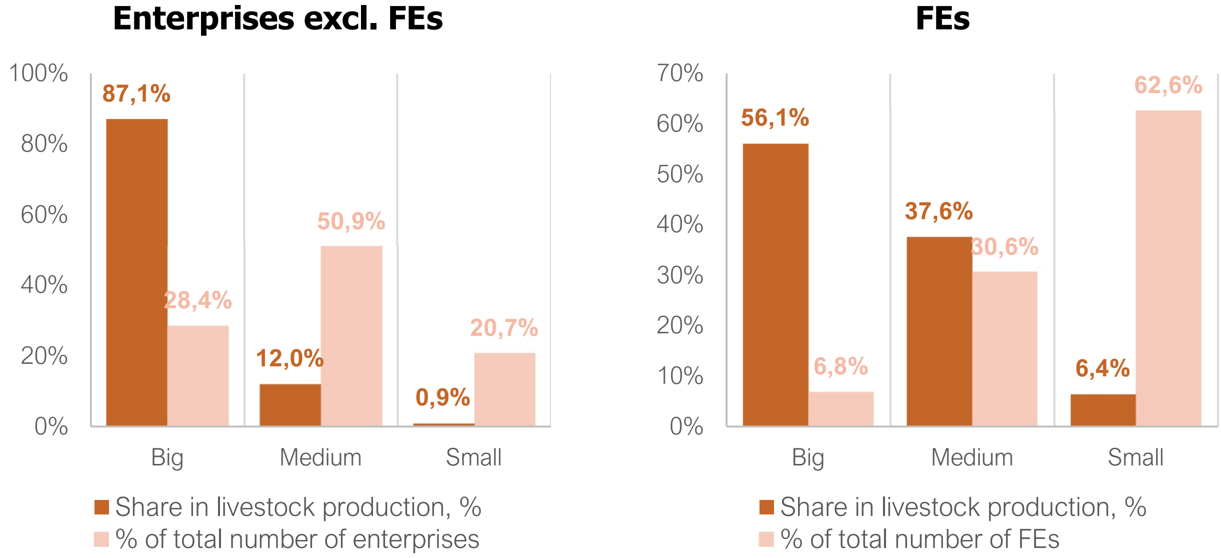
Enterprises excl. FEs **FEs**



Source: State Statistics Service of Ukraine; authors' calculations

Livestock production presents the opposite picture, marked by **extreme concentration of production**. This pattern is evident in both the corporate and FE segments. In practice, this would mean that under the classification criteria proposed by the Draft Law, **small livestock enterprises are not an economically significant category**.

Livestock production structure by producer type and size category, 2024, %



Source: State Statistics Service of Ukraine; authors' calculations

5.1.2. Land use structure and efficiency

An analysis of land distribution reveals a paradox: despite the dominance of large producers in production, the land area appears to be shared almost equally between large and medium producers.

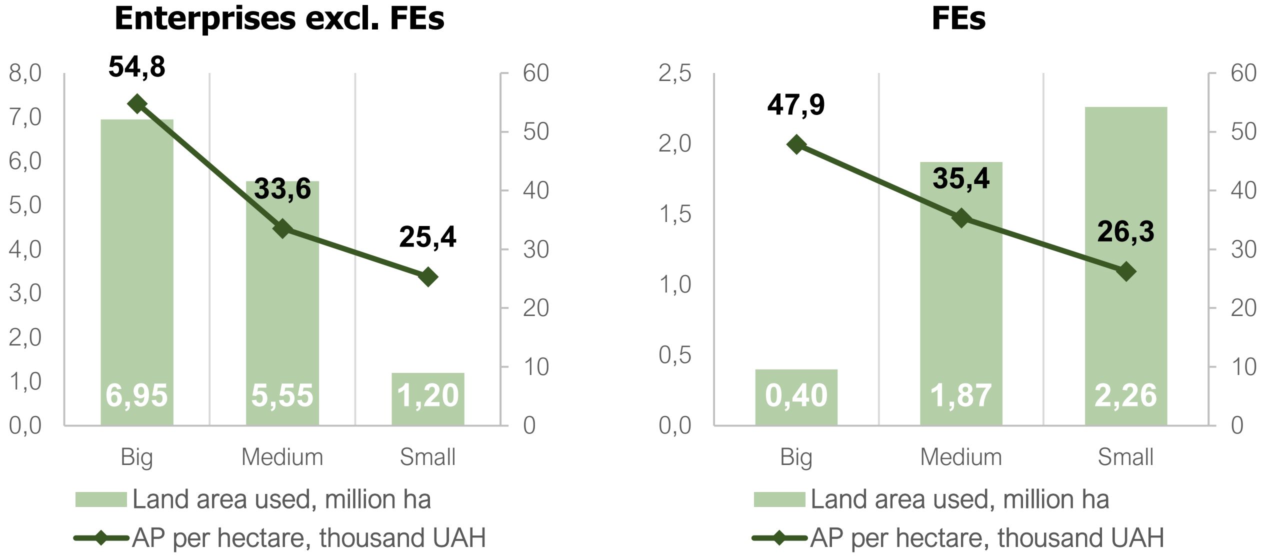
Overall distribution of land among commercial producers:

- **Large producers:** 7.3 million ha (40.3% of farmland) — average of **7,567 ha per entity**
- **Medium producers:** 7.4 million ha (40.7%) — average of **1,493 ha per entity**
- **Small producers:** 3.4 million ha (19.0%) — average of **160 ha per entity**

Land use efficiency (agricultural production per 1 ha of farmland) is considerably higher among large producers, mainly due to livestock operations: **UAH 54,400/ha** compared to **UAH 34,000/ha** for medium producers and **UAH 26,000/ha** for small producers.

At the same time, crop production exhibits rather equal productivity levels across all producer types. In particular, in 2024, crop production per hectare of agricultural land was nearly identical for small and medium FEs and corporate enterprises: **UAH 29,600/ha** and **UAH 29,900/ha**, respectively.

Distribution of land and agricultural production (AP) per hectare by producer type and size category, 2024, %



Source: State Statistics Service of Ukraine; authors' calculations

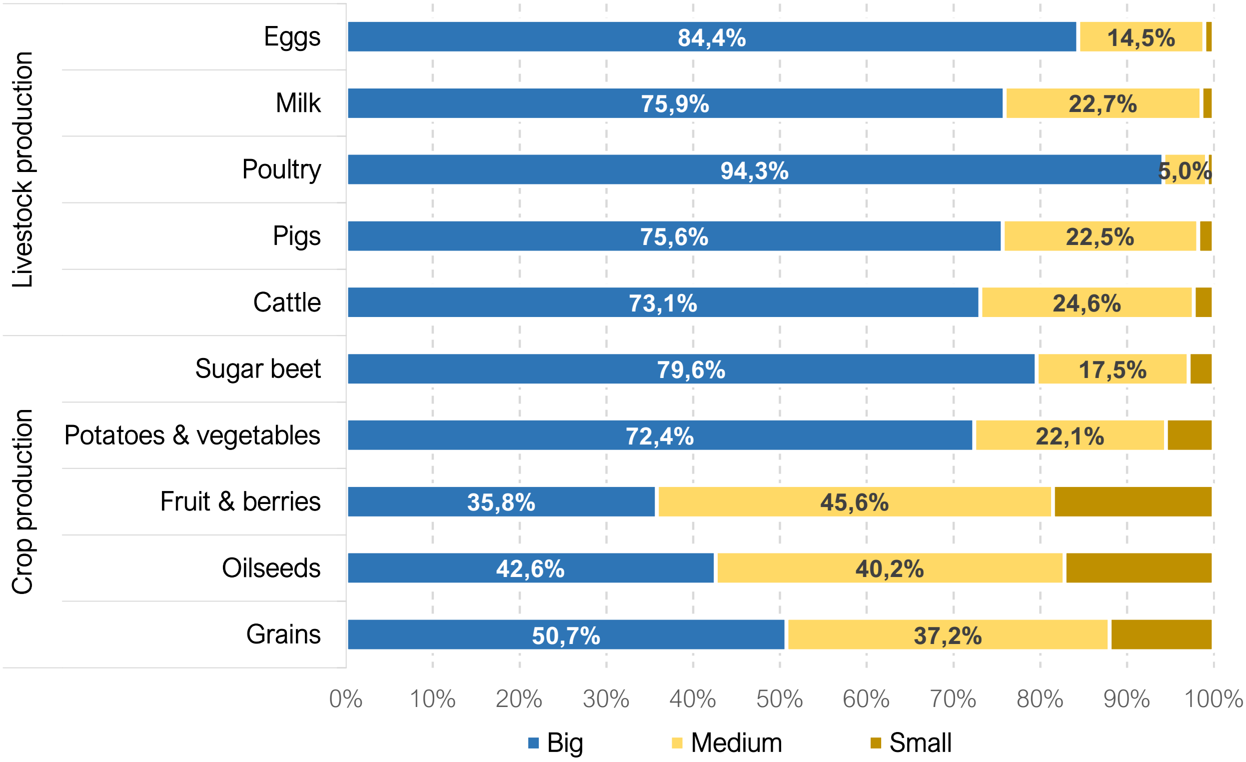
5.1.3. Specialization by product type

An analysis of how different producer categories are represented in specific agricultural commodity markets reveals sharply contrasting models of specialization and concentration within market segments of Ukraine's agricultural sector. The structure of production of different commodities by enterprise categories, as per Draft Law No. 13202-1, shows that the choice of specialization significantly shapes the viability of producers of different sizes.

Crop production: Diversified opportunities

- Grain crops are a balanced branch in terms of producer representation: large producers control 50.7% of the market, medium producers 37.2%, and small producers maintain a significant niche of 12.0%. This reflects the traditional role of grain as the foundation of Ukrainian agriculture, where diverse production models can coexist effectively.
- Oilseeds demonstrate moderate concentration: large producers account for 42.6%, medium for 40.2%, and small for 17.2%. This relative balance is explained by the high profitability of oilseeds, making them attractive to farms of all sizes.
- Fruit and berries provide the best opportunities for small and medium producers within the crop sector: large producers hold 35.8%, medium 45.6%, and small 18.5%. This structure reflects the labor-intensive nature of horticulture and the traditional orientation of smaller farms toward diversified production.
- Sugar beet exhibits the highest concentration within crop production: large producers dominate with 79.6%, medium producers account for 17.5%, and small producers only 2.9%. This reflects the technological specifics of sugar beet cultivation, which requires substantial investment in specialized equipment and close integration with processing enterprises.

Share of large, medium, and small producers in production of selected crop and livestock commodities, 2024, %



Source: State Statistics Service of Ukraine; authors' calculations

Livestock: Extreme concentration

- Livestock production presents a starkly different picture, with exceptionally high levels of concentration that render it almost inaccessible for small producers—at least under the classification criteria of the Draft Law.
- Poultry farming shows the highest concentration across all branches of agriculture: large producers control 94.3% of the market, medium producers 5.0%, and small producers only 0.8%. This extreme concentration reflects the industrial nature of modern poultry farming, with its requirements for automation, biosecurity, and economies of scale.
- Cattle and pig production also demonstrate high concentration: large producers account for 73.1% and 75.6%, medium for 24.6% and 22.5%, and small for just 2.3% and 1.8%, respectively.
- Dairy farming retains somewhat greater opportunities for medium producers, but even in this traditionally "peasant" branch, production is highly concentrated: large producers control 75.9%, medium 22.7%, and small a mere 1.4%.

5.1.4. Critical assessment of the Draft Law No. 13202-1 criteria

The analysis of specialization reveals a clear pattern: the higher the technological complexity and capital intensity of a sector, the greater the production concentration. Livestock branches are characterized by much stronger concentration compared to crop production due to:

- **High entry barriers** – the need for specialized facilities, equipment, and technologies;
- **Biosecurity requirements** – compliance with sanitary and veterinary standards;
- **Management complexity** – demand for skilled labor and constant monitoring.

By contrast, **crop production**, particularly grain and oilseeds, remains more accessible for producers of different sizes. This is due to the possibility of outsourcing certain operations, such as using services from machinery stations, and the lower requirements for permanent capital investment.

Despite the logical explanation for higher concentration in livestock, the criteria proposed in the Draft Law still require reconsideration. The extreme concentration and the negligible share of small producers—less than 2%—call into question the very rationale of distinguishing them as a separate category for state support.

The core problem of the proposed criteria in the livestock context lies in the fact that livestock farms require substantial investments in fixed assets (buildings, equipment, breeding stock), which automatically inflates the balance-sheet value of their assets even at relatively modest production scales.

For example, a modern dairy farm with 100 cows requires **EUR 2–3 million** in investments, including barns, milking parlors, equipment, and breeding animals. Such asset levels formally classify the farm as a **large producer**, although in practice it may be an ordinary family farm. Thus, the proposed categorization model does not account for sectoral specificities and investment requirements in livestock.

Incorrect classification of livestock farms may have serious consequences for public support policy. Farms that are, in fact, small or medium-sized by their economic nature risk losing access to support programs intended for small and medium agricultural businesses.

This is particularly critical in the context of **EU integration**, as the **EU's CAP** provides substantial support precisely to small and medium livestock farms as a foundation of rural social stability.

5.1.5. Conclusions on the application of Draft Law criteria

The practical application of the classification criteria for agricultural producers proposed in Draft Law No. 13202-1 reveals both potential advantages and significant limitations, particularly in relation to **livestock**.

For **crop production**, the proposed criteria demonstrate relative adequacy and the ability to reflect the real economic structure of the sector. The balanced distribution of production among large (56.2%), medium (32.5%), and small (11.2%) producers indicates that financial indicators (income, assets, workforce) correlate reasonably well with actual production scales and economic impact.

Such a structure could provide the basis for **differentiated support policies**, addressing the specific needs of different producer categories—from start-up programs for small farmers to investment incentives for large agricultural producers.

However, the absence of a **landholding criterion** remains a critical weakness. This omission distorts the distribution and creates situations where an entity classified as "small" may nevertheless control large tracts of land. For instance, our data analysis shows that in 2024, about **400,000 ha** of farmland were under the control of producers classified as "small," whose individual landholdings exceeded 1,000 ha.

Applying the same criteria to **livestock production** reveals fundamental methodological flaws. The extreme concentration of production in large enterprises and the minimal share of small producers largely reflect the inadequacy of the classification criteria rather than the actual economic structure of the sector.

This issue is especially visible in **poultry and egg production**, where even relatively modest farms, in physical terms, can surpass the financial thresholds for large producers due to high capital turnover and short production cycles.

Incorrect classification of livestock enterprises creates serious risks for designing effective agricultural support policies. Farms that are small or medium-sized in economic and social terms risk exclusion from targeted support programs.

The results of the analysis of Draft Law No. 13202-1 criteria highlight the **need to incorporate sector-specific classification criteria** for both crop and livestock production, considering technological features and the socio-economic role of each subsector.

5.2. Structure of agricultural enterprises by landholding size

The size of landholdings remains the most traditional and universal criterion for analyzing the structure of Ukraine's agricultural sector. Unlike financial indicators, which may fluctuate under the influence of market conditions, inflation, or accounting practices, the size of landholding reflects the real production capacity and economic potential of a farm. An important feature of Ukraine's agricultural sector is that about **94% of agricultural land is under lease rather than ownership** by enterprises. Therefore, the **landholding size** serves as an indicator not so much of property ownership, but rather of the **scale of economic activity** and the **market competitiveness** of the producer. This criterion is especially important in the Ukrainian context, where land remains the key factor of production, and its distribution and concentration carry not only economic but also social significance.

For this reason, as noted earlier, agribusiness practitioners rely on informal scales:

1. **Small producers** – farms cultivating up to 150–200 hectares of land (sometimes up to 500 ha). They are mainly focused on supplying local and regional markets.
2. **Medium-sized producers** – enterprises with a land area of up to 10,000 hectares. They combine intensive and extensive farming methods, and their activities target both domestic and export markets.
3. **Large producers** – companies with a land area exceeding 10,000 hectares. They are leaders in the production of key export-oriented crops and actively adopt advanced technologies.

The criterion of agricultural land in use also makes it possible to analyze the transformation processes of farming entities and to identify both the most vulnerable and the most resilient categories over time.

5.2.1. Changes in the structure and land area of enterprises

What has changed in the structure of agricultural enterprises in Ukraine over the last 15 years?

An analysis of structural changes over 2010–2024 reveals profound transformations, characterized by a simultaneous reduction in the number of small farms and an increasing concentration of land resources in the hands of large producers.

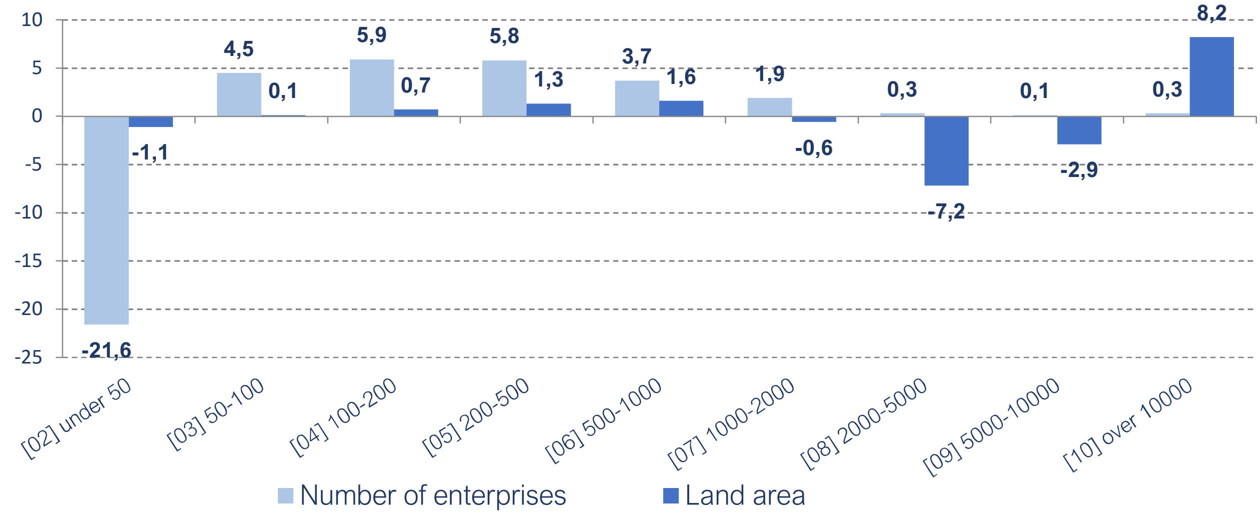
Structural changes in enterprises (including FEs), by landholding size category, 2010–2024

Category	share by number of enterprises, %			share by land area, %			average enterprise size, ha		
	2010	2016	2024	2010	2016	2024	2010	2016	2024
[01] landless	2.6%	1.8%	1.9%	0.0%	0.0%	0.0%	0	0	0
[02] under 50	52.9%	50.1%	31.3%	2.5%	2.5%	1.4%	23	25	29
[03] 50-100	10.1%	11.9%	14.6%	1.5%	1.7%	1.6%	72	72	72
[04] 100-200	7.5%	8.0%	13.3%	2.2%	2.3%	2.9%	144	145	139
[05] 200-500	8.8%	9.8%	14.6%	6.0%	6.4%	7.3%	326	324	323

[06] 500-1000	5.9%	6.4%	9.6%	8.9%	9.2%	10.5%	719	712	713
[07] 1000-2000	5.7%	6.0%	7.6%	17.2%	17.4%	16.6%	1 433	1 433	1 423
[08] 2000-5000	5.0%	4.7%	5.3%	31.8%	28.2%	24.6%	3 028	3 003	3 002
[09] 5000-10000	1.1%	1.0%	1.2%	15.0%	14.2%	12.1%	6 707	6 761	6 666
[10] over 10000	0.3%	0.4%	0.6%	14.8%	18.0%	23.0%	22 615	22 404	23 256
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	479	495	649

Source: State Statistics Service of Ukraine; authors' calculations

Structural changes in count and landholding size of enterprises (including FEs), ± percentage points, 2024 to 2010



Source: State Statistics Service of Ukraine; authors' calculations

The most striking trend is the decline in the share of small farms of up to 50 ha in size. In 2010, they represented 52.9% of all agricultural enterprises; however, by 2024, their share fell to 31.3%—a drop of more than 21 percentage points. This equates to the disappearance of about 10,000 small farms, which either ceased operations, were acquired by larger enterprises, or dropped out of statistical reporting due to the war.

At the same time, the share of upper-tier small producers increased significantly. Farms with 50–500 ha strengthened their positions as follows:

- 50–100 ha farms grew from 10.1% to 14.6%;
- 100–200 ha farms grew from 7.5% to 13.3%;
- 200–500 ha farms grew from 8.8% to 14.6%.

Their combined land share rose from 9.7% in 2010 to 11.8% in 2024.

In the medium and large enterprise segment, trends are polarized. Farms between 1,000 and 10,000 ha lost 10.7 percentage points in land share, from 64.0% in 2010 to 53.3% in 2024.

Meanwhile, the largest agroholdings (over 10,000 ha) doubled their share from 0.3% to 0.6% of the total number of farms, while their land share grew from 14.8% to 23.0%. This indicates not only an increase in the number of large-scale enterprises but also a substantial rise in their average size—from 22,615 ha to 23,256 ha.

5.2.2. Changes in production

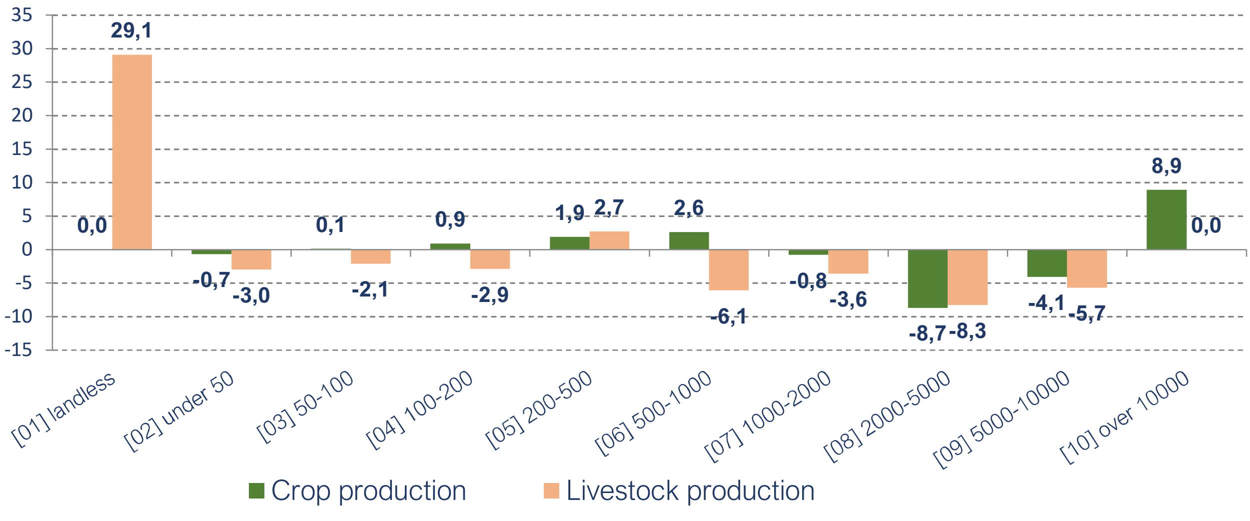
Structural shifts in the number and size of farms have led to a major redistribution of production capacity.

Contribution of enterprises (including FEs) to agricultural production, by landholding size category, 2010–2024

Category	share in total production, %			share in crop production, %			share in livestock production, %		
	2010	2016	2024	2010	2016	2024	2010	2016	2024
[01] landless	5.7%	6.2%	8.3%	0.0%	0.0%	0.0%	19.4%	25.5%	48.5%
[02] under 50	2.7%	2.7%	1.2%	1.7%	1.7%	1.0%	5.4%	6.3%	2.4%
[03] 50-100	1.7%	1.8%	1.2%	1.1%	1.4%	1.2%	3.2%	3.1%	1.1%
[04] 100-200	2.8%	2.0%	2.6%	1.7%	1.8%	2.6%	5.6%	2.5%	2.7%
[05] 200-500	4.3%	6.2%	6.4%	4.6%	5.5%	6.5%	3.5%	8.6%	6.2%
[06] 500-1000	7.9%	7.3%	8.8%	7.5%	8.3%	10.1%	8.6%	4.0%	2.5%
[07] 1000-2000	14.1%	15.1%	13.7%	16.3%	16.4%	15.5%	8.8%	10.6%	5.2%
[08] 2000-5000	28.5%	24.7%	21.2%	31.7%	27.3%	23.0%	21.0%	15.8%	12.7%
[09] 5000-10000	15.1%	13.7%	11.2%	16.3%	14.5%	12.2%	12.2%	11.1%	6.5%
[10] over 10000	17.1%	20.3%	25.3%	19.1%	23.1%	28.0%	12.4%	12.6%	12.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: State Statistics Service of Ukraine; authors' calculations

Structural changes in agricultural production of enterprises (including FEs), ± percentage points, by landholding size category, 2024 to 2010



Source: State Statistics Service of Ukraine; authors' calculations

The largest enterprises (over 10,000 ha) increased their contribution to total production from 17.1% in 2010 to 25.3% in 2024, making them the dominant force in agricultural production.

Medium-sized enterprises (1,000–10,000 ha), which accounted for 57.7% of production in 2010, reduced their share to 46.2% by 2024.

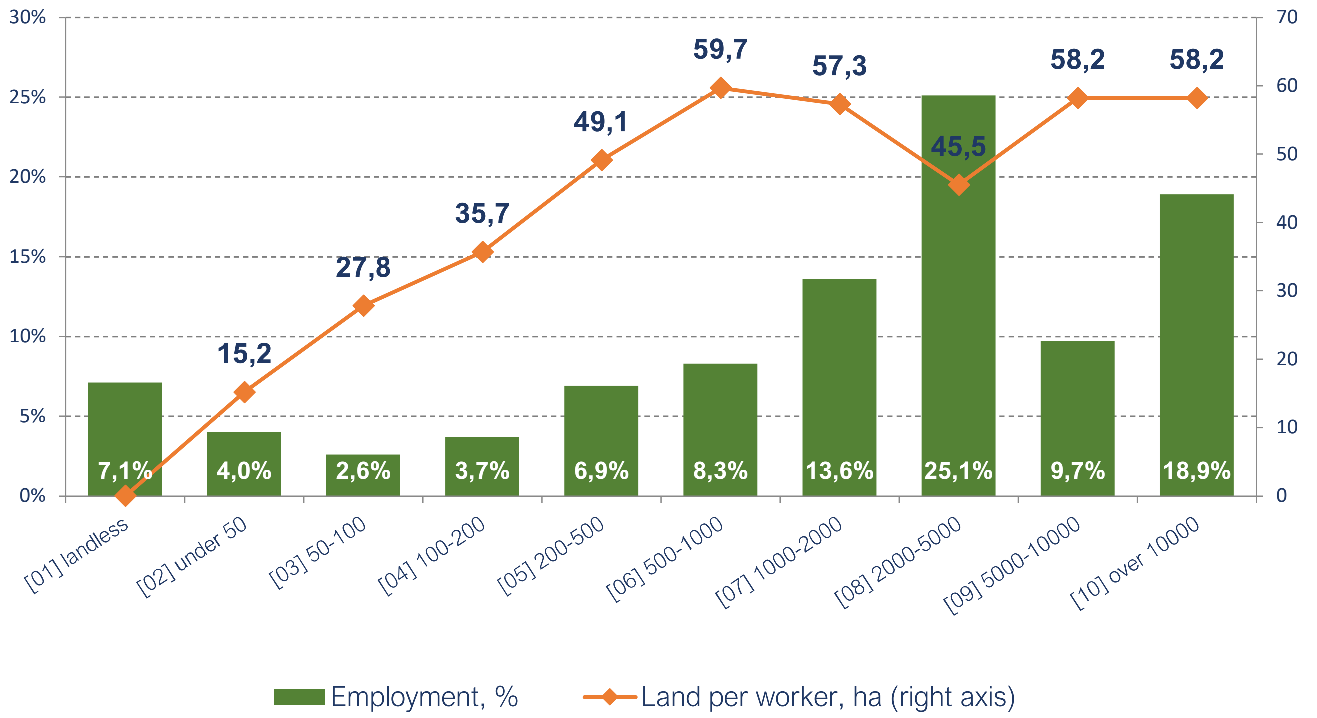
Small producers and the lower-medium segment (up to 1,000 ha) generally maintained or even slightly strengthened their production positions, particularly in the 200–500 ha category, whose share rose from 4.3% to 6.4%.

5.2.3. Employment and labor productivity: Breaking stereotypes

An analysis of employment structure in Ukraine's agricultural sector reveals important patterns that challenge common stereotypes about the impact of production concentration on the labor market.

Enterprises with a land area of **over 1,000 ha**, as well as landless enterprises (large livestock producers), provide **nearly 75% of all official jobs** in the commercial agricultural sector. The largest contribution to employment comes from medium-sized enterprises: farms of 2,000–5,000 ha account for 25.1% of jobs, farms of over 10,000 ha for 18.9%, and farms of 1,000–2,000 ha for 13.6%.

Employment (% of total) and land per worker (ha) enterprises (including FEs), by landholding size category, 2024



Source: State Statistics Service of Ukraine; authors' calculations

This structure is not an anomaly, but rather reflects the historical development of Ukrainian agriculture and rural areas. Unlike countries with strong traditions of family farming, Ukrainian agriculture evolved from collective and state farms of the Soviet era. This shaped a specific labor culture, where most rural residents are accustomed to **working as hired laborers** in large structures rather than running their own businesses.

Large enterprises play a crucial social role—serving as "universities" for rural youth, where they gain experience, learn modern technologies, and understand market mechanisms. Only after such training do some workers decide to start their own businesses. Thus, the dominance of large employers is not so much a problem as an **objective reality of the transition** from a planned to a market economy.

The chart on **land per worker** only partly supports the notion that larger enterprises (cultivating more land) proportionally employ fewer workers. Data show that beginning with farms of **500–1,000 ha**, the indicator stabilizes at **45–60 ha per worker**. Farms of **1,000–2,000 ha** average **57.3 ha per worker**, farms of **2,000–**

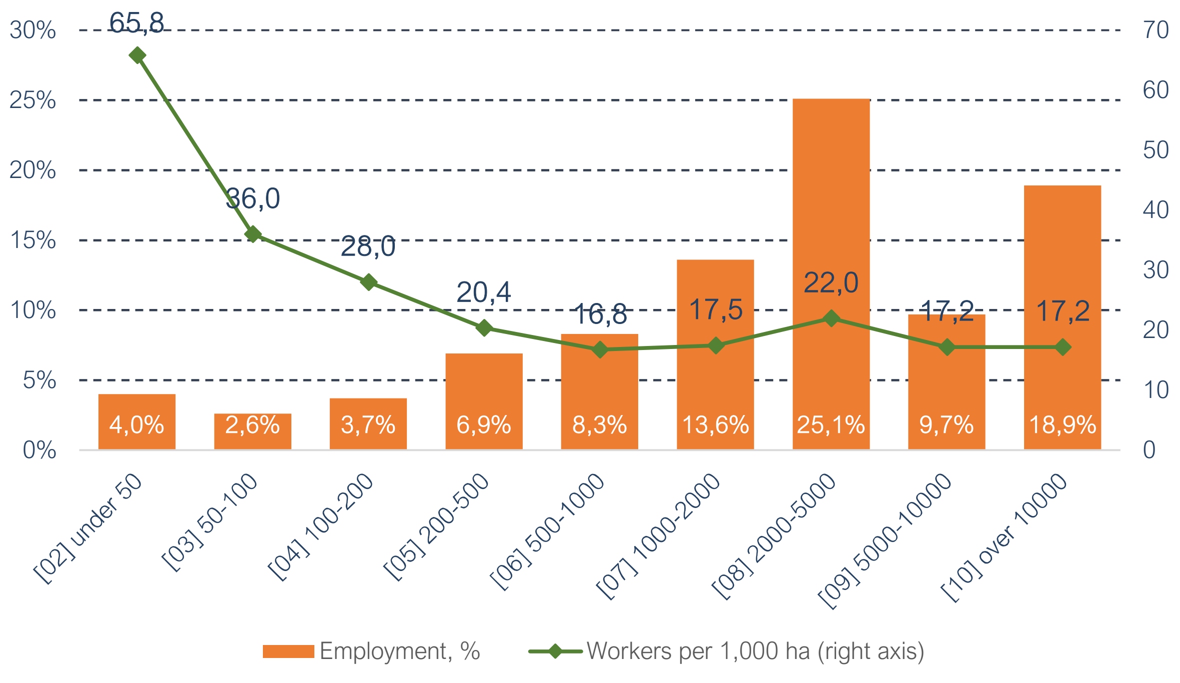
5,000 ha average **45.5 ha per worker**, and farms of **over 5,000 ha** average **58.2 ha per worker**.

This relative uniformity (beginning with a certain landholding size) suggests that some **technological optimum** has been achieved: regardless of farm size, modern technologies and organizational structures provide roughly equal labor productivity. A sharp increase in land per worker is observed only when moving from small to medium farms (from **15.2 ha per worker** in farms of up to 50 ha to **59.7 ha per worker** in farms of 500–1,000 ha in size), reflecting the transition from semi-subsistence to fully commercial production.

Of course, these data do not account for possible differences in staff composition (large enterprises may have proportionally larger administrative teams) or informal employment in small farms. Nevertheless, they clearly demonstrate that **medium and large enterprises are not only the main producers, but also the main employers** in Ukraine's agriculture, providing legal employment and social protection.

An analysis of the inverse indicator—the **number of workers per 1,000 hectares of agricultural land**—provides a deeper understanding of the **labor intensity** of production in Ukrainian agricultural enterprises. While in absolute terms large enterprises remain the main employers, **small and medium-sized farms** play a **crucial role** in maintaining **social stability and employment** at the local level.

Employment (% of total) and workers per 1,000 ha in enterprises (including FEs), by landholding size category, 2024



Source: State Statistics Service of Ukraine, authors' calculations

In 2024, farms with an area of 50–500 hectares employed about 28 workers per 1,000 hectares, while enterprises cultivating more than 500 hectares employed only 18 workers per 1,000 hectares. Thus, **labor intensity in small and medium-sized farms is approximately 55% higher** than in large ones.

From a policy perspective, this implies that further land concentration and mechanization, while increasing capital efficiency, reduce employment potential in rural areas without a significant rise in labor productivity. In other words, the structural efficiency of large farms has reached a point where further consolidation leads to job losses without yielding significant economic benefits.

This has two major policy implications:

1. **Social cohesion:** Supporting small and medium-sized farms (50–500 ha)—which account for about three-quarters of all enterprises and over 13% of the land used by enterprises—is key to preserving rural employment and restoring demographic potential.
2. **Balanced modernization:** State support should combine productivity growth with the preservation of a socially inclusive agricultural structure, in line with the principles of the EU CAP.

For comparison, in the EU (according to Eurostat and *Statistics Explained*), the highest labor intensity among major countries in 2020 was observed in **Romania** (approximately 140–180 full-time equivalent workers per 1,000 ha) and **Poland** (around 120–130 per 1,000 ha). In contrast, **France** and **Spain** reported approximately 50–70 and 40–60 workers per 1,000 ha, respectively, while **Germany** had about 40–50 per 1,000 ha. This corresponds to **6–9 hectares per worker** in Romania and Poland versus **15–25 hectares per worker** in France, Spain, and Germany, reflecting the **structural dualism** between labor-intensive small-scale agriculture and capital-intensive, mechanized farming systems.

5.2.4. Structure of agricultural enterprises by legal form of organization

An analysis of legal forms of organization shows that **farmer enterprises (FE, fermerski hospodarstva)** are the largest group of producers in terms of quantity—**68.6% of all enterprises**, controlling nearly a **quarter of Ukraine's farmland**.

Distribution of farmland and number of entities by legal form of organization, 2024

	Limited liability companies	Farmer enterprises	Private enterprises	Joint stock companies	Cooperatives	Others, incl. state-owned farms
Number of entities	19.7%	68.6%	8.2%	0.6%	1.0%	1.9%
Total agricultural land	**52.5%**	**24.9%**	**15.0%**	**2.5%**	**1.7%**	**3.4%**
[02] under 50	0.1%	1.3%	0.0%	0.0%	0.0%	0.0%
[03] 50-100	0.2%	1.4%	0.1%	0.0%	0.0%	0.0%
[04] 100-200	0.5%	2.1%	0.2%	0.0%	0.0%	0.1%
[05] 200-500	1.7%	4.5%	0.8%	0.0%	0.1%	0.2%
[06] 500-1000	3.6%	4.9%	1.5%	0.1%	0.2%	0.3%
[07] 1000-2000	7.3%	5.0%	3.0%	0.2%	0.4%	0.6%
[08] 2000-5000	13.4%	4.1%	4.5%	0.7%	0.6%	1.3%
[09] 5000-10000	7.2%	1.2%	2.3%	0.3%	0.4%	0.7%
[10] over 10000	18.6%	0.4%	2.6%	1.1%	0.0%	0.2%

Source: State Statistics Service of Ukraine; authors' calculations

However, the most telling development is the **internal distribution of land resources within the FE category itself**, which demonstrates active consolidation even inside this group, where usually small and medium farms prevail. The bulk of farmland is concentrated not in the smallest farms (which dominate numerically), but in **medium-sized FEs**. This indicates deepening stratification even within a single legal category.

This trend shows that land concentration is driven not only by external competitive pressure from corporate enterprises but also by **internal competition among FEs of different sizes**. Medium-sized FEs, with better access to finance and technology than small farms, but greater flexibility than large companies, are gradually pushing the smallest producers out of the land rental market.

Such **two-tiered consolidation**—between different legal forms and within the FE segment—creates a complex challenge for public policy on supporting small farms in the context of EU integration, as it requires differentiated approaches even within a single legal category.

5.2.5. Sectoral specialization and production concentration

Farm size largely determines production specialization.

Share of enterprises (including FEs) in key crop markets in 2024 (% share of total production)

	crop production, %	Grains	Oilseeds	Fruit & berries	Potatoes & vegetables	Sugar beet
[01] landless	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
[02] under 50	1.0%	0.6%	1.0%	8.8%	11.0%	0.1%
[03] 50-100	1.2%	0.9%	1.4%	10.2%	1.9%	0.3%
[04] 100-200	2.6%	1.9%	2.9%	13.7%	11.1%	0.8%
[05] 200-500	6.5%	5.6%	7.4%	16.6%	9.2%	2.1%
[06] 500-1000	10.1%	9.1%	11.1%	17.9%	6.2%	3.9%
[07] 1000-2000	15.5%	15.4%	16.2%	10.6%	8.4%	9.5%
[08] 2000-5000	23.0%	23.9%	22.9%	12.8%	8.7%	15.1%
[09] 5000-10000	12.2%	12.2%	12.6%	5.5%	3.1%	9.2%
[10] over 10000	28.0%	30.4%	24.5%	3.9%	40.5%	59.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: State Statistics Service of Ukraine; authors' calculations

The crop sector demonstrates a relatively balanced distribution across producer categories, though with clear sectoral distinctions:

- **Grain** production shows moderate concentration, allowing effective participation of all categories. Large farms (over 10,000 ha) control 30.4% of the market, medium farms (from 500 ha to 10,000 ha) more than 60%, and small farms (under 500 ha) up to 10%.
- **Oilseeds** show a similar pattern: large farms account for 24.5%, medium farms over 62.8%, and small farms 12.7%. High profitability makes oilseeds attractive across farm sizes.
- **Fruit and berry production** is the most favorable niche for small and medium farms: medium farms hold 46.8%, small farms 49.3%, and large farms just 3.9%. This reflects the labor-intensive character of the sector and its traditional orientation toward family farms.
- **Vegetable production** is segmented more evenly: small farms contribute 33.2%, medium farms 26.3%, and large farms over 40%. This dualistic structure is logical,

with large-scale producers supplying retail chains and smaller farms serving local markets.

- **Sugar beet** shows the highest concentration among crops: large farms control 59.1%, reflecting capital-intensive technology and the need for close integration with processing facilities.

Share of agricultural enterprises (including FEs) in key livestock markets in 2024 (% share of total production)

	livestock production, %	Cattle	Pigs	Poultry	Milk	Eggs
[01] landless	48.5%	3.9%	13.9%	79.1%	4.1%	70.7%
[02] under 50	2.4%	1.1%	6.8%	1.8%	1.0%	0.5%
[03] 50-100	1.1%	0.6%	1.1%	0.8%	0.3%	4.0%
[04] 100-200	2.7%	1.8%	1.3%	3.5%	1.8%	4.9%
[05] 200-500	6.2%	1.7%	4.2%	8.7%	2.1%	6.2%
[06] 500-1000	2.5%	3.9%	4.2%	0.7%	3.7%	4.4%
[07] 1000-2000	5.2%	13.4%	3.9%	1.5%	12.9%	7.6%
[08] 2000-5000	12.7%	31.3%	15.4%	3.8%	31.2%	1.7%
[09] 5000-10000	6.5%	17.8%	13.6%	0.1%	18.0%	0.0%
[10] over 10000	12.4%	24.4%	35.5%	0.0%	24.9%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: State Statistics Service of Ukraine; authors' calculations

The livestock sector is far more concentrated:

- **Poultry** shows the highest concentration, with large farms producing 65% of poultry meat and nearly 60% of eggs. Although over 110 landless enterprises were active in poultry production, the top 5 farms provided 80% of the total production.
- **Pig and cattle farming** are also highly concentrated, though less so. Large farms produce about 25% of beef and 45% of pork.
- **Dairy farming** retains somewhat greater opportunities for medium-sized producers (60% of the market), but even here production is becoming more concentrated and shifting toward industrial scales.

5.2.6. Spatial and socio-economic implications of structural change

Structural transformation has deep social and economic consequences for rural development. The decline in small farms (under 50 ha) reduces local employment and diversified production, traditionally important for community stability.

At the same time, the growth of **medium farms (200–1000 ha)** creates a new class of commercial producers capable of efficiently combining economic competitiveness with local social responsibility.

These changes create new policy challenges:

- The need for **targeted programs** to support the viable middle segment (200–2000 ha) as the foundation of a balanced agricultural structure.
- Development of **support tools for small farms** as an important element of rural social stability.
- Mechanisms to **prevent excessive land concentration** and sustain competitive markets.

5.2.7. Comparison with the Draft Law criteria

Landholding size analysis reveals discrepancies with the financial criteria of Draft Law No. 13202-1, particularly in crop farming, and is entirely unsuitable for classifying livestock producers.

For example, under the landholding criterion, **small farms (up to 200 ha)** account for 59.2% of enterprises with 5.9% of land. Under financial criteria, 78.3% of enterprises would be classified as small, holding 19.0% of land. In livestock, where nearly half of the production is ensured by landless enterprises, the landholding criterion is meaningless.

This divergence underscores the need for a **comprehensive classification approach** combining financial indicators with landholding size, especially for designing targeted support programs that reflect the real capacities and needs of different categories of producers.

5.3. Section conclusions

The analysis of farm structure by landholding size reveals a **tripolar model** of agricultural development in Ukraine:

1. **Large farms (over 10,000 ha)** – dominant players in export-oriented staple crops.
2. **Medium farms (200–2000 ha)** – the backbone of a balanced agricultural structure.
3. **Small specialized farms (up to 200 ha)** – niches in high-value, labor-intensive production.

This structure requires a **carefully balanced public policy**. Successful adaptation to EU requirements will require aligning the **economic efficiency of large farms** with the **social role of small and medium farming** for rural stability.

6. Agricultural companies in Ukraine's agricultural system

The reform of Ukraine's agriculture in the late 1990s and early 2000s—aimed at restructuring collective agricultural enterprises and land privatization—exposed deep institutional gaps. Disrupted value chains, systemic non-compliance with contractual obligations among market participants, and limited financial instruments created the preconditions for the emergence of integrated organizational and production structures, which later became informally known as **agroholdings.** The term *agroholding* can be applied both to agricultural companies combining various agricultural and non-agricultural business activities (vertically integrated, business groups), and to large agricultural enterprises that bring together several farms under a single production umbrella (horizontally integrated).

6.1. Historical background and emergence of agricultural companies

Consolidation of agricultural businesses emerged as a distinctive phenomenon in the transformation of Ukraine's agricultural sector, driven by a specific combination of historical, economic, and institutional factors. Unlike classic farm-development models in countries with mature market traditions, Ukrainian agroholdings formed amid a systemic transition from a planned to a market economy.

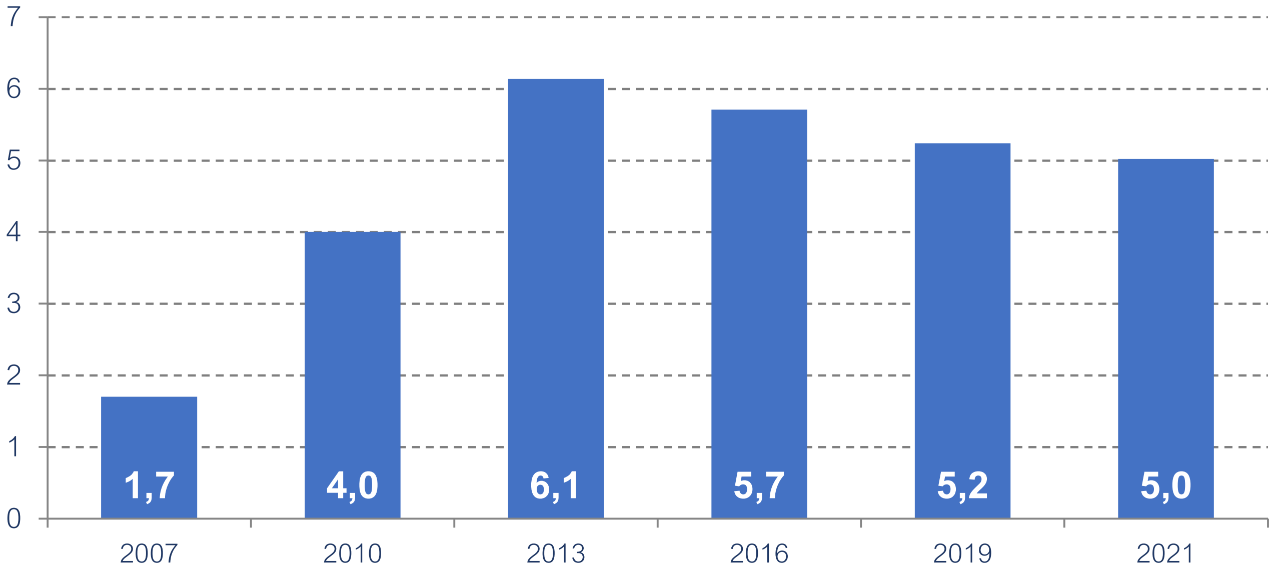
Integrated agricultural companies comprise a set of legal entities (subsidiary and affiliated companies) linked by contractual obligations or common ownership, with shared goals and tasks, where one or several entities act as the parent company. This structure enabled the integration of a broad spectrum of activities: from primary agricultural production to first-stage processing, logistics, marketing, and service operations.

It is important to note that the rise of agroholdings was largely a consequence of the absence of a transparent and functioning farmland market. Under the moratorium on sales of agricultural land, consolidation could occur only through **leasing mechanisms**. This generated a specific model whereby formally independent legal entities attempted to operate as a single production complex under centralized management.

6.2. Stages of development of agricultural companies

The evolution of *agroholdings* passed through several key stages. In **2007**, roughly **20** large agricultural companies operated in Ukraine, controlling **1.7 million ha** of agricultural land. By **2016**, their number exceeded **110** companies with a total land area of about **5.7 million ha**, accounting for nearly **28%** of the area officially cultivated by agricultural enterprises.

Evolution of *agroholdings'* land area in the pre-war period, million ha



Source: authors' calculations; UCAB

The phase of active land consolidation ended in the late 2010s. Large agricultural companies shifted from an **extensive** model to an **intensive** one, focusing on innovation, improved management efficiency, and sustainability in production. As a result, by **2021,** their total area declined to **5 million ha**, indicating a transition from quantitative growth to qualitative optimization.

An important trend was **cooperation with medium and small producers**. Large companies increasingly pursued cooperation beyond land leases by supplying technology and services and facilitating market access for smaller producers. This model resembles New Zealand's **Fonterra** experience, where large structures act as integrators and technology hubs for smaller producers.

6.3. International comparisons and EU-integration challenges

"Ukraine's phenomenon" of the consolidation of agricultural businesses is not unique globally. Similar structures exist in countries with extensive land resources, for example, **Brazil, Argentina, and Australia**. The **EU** also shows a trend toward farm consolidation, especially in Eastern Europe. For example, companies in **Romania** operate farms of over **50,000 ha**, in **Lithuania** over **35,000 ha,** and in **Croatia** over **30,000** ha—levels that, relative to those countries' size, are even more striking than in Ukraine.

Consolidation trends are also observed in "Old Europe": in **France**, only **7%** of farms exceed **100 ha**, yet they cultivate **over half** of all farmland; in **Czechia**, **8%** of farms control **70%** of land.

However, Ukraine's model has its specificity. Unlike European analogs, often formed through the gradual consolidation of private holdings, Ukrainian large agricultural companies emerged as a **response to institutional gaps** of the transition period. The absence of a functioning land market, weaknesses in the financial system, and imperfect contract law pushed producers toward alternative business structures.

EU integration creates both opportunities and challenges for Ukrainian *agroholdings*. On the one hand, they are already **pioneering in adopting EU sustainability standards**, given their cooperation with European partners and international financial institutions that require high compliance. On the other hand, the **EU's CAP**—with its emphasis on supporting small and medium farms—may require substantial adaptation of their business models.

6.4. Role of *agroholdings* in production and export potential

Agroholdings are crucial for Ukraine's food security and export capacity. Earlier assessments (2016–2018) put their contribution to total agricultural production at **20–23%**, including up to **20%** in crops and **25–27%** in livestock.

Estimates indicated that large agricultural companies accounted for **up to 30% of total grain production** (primarily maize), **a quarter of oilseeds**, and **45–50% of sugar beet**. In livestock, dominance was especially visible in **poultry**—about **85% of poultry meat** and **75% of eggs**—and in **pig farming**, where more than half of production was generated by integrated companies with *agroholding* features.

Integrated agricultural companies also play a major role in export capacity. With access to international capital markets, modern technologies, and global supply chains, they typically represent and ensure the competitiveness of Ukrainian products in world markets. Notably, this competitiveness was achieved with minimal state support: in 2019–2021, support to Ukrainian agricultural producers amounted to only **1.7% of output value**, roughly **ten times lower than in EU** countries.

6.5. Negative aspects of large agribusiness

Despite achievements in efficiency and exports, *agroholdings* are associated with several controversial effects that shape (sometimes groundlessly) negative perceptions among the public and policymakers:

1. **Land concentration and monopolization risks.** Accumulation of large land areas can limit access for small farmers, increasing rural economic inequality as land-lease competition often puts small farms at a disadvantage.
2. **Impact on rural social structure.** High mechanization allows large companies to operate with fewer jobs. For communities, this may mean reduced employment, youth outmigration, and a deepening demographic crisis.
3. **Environmental challenges.** Intensive, yield-maximizing models involve heavy use of fertilizers and pesticides, raising risks of soil degradation, water pollution, and biodiversity loss.
4. **Exposure to global markets.** Export orientation increases sensitivity to price volatility and trade disruptions. Shocks (price crises, barriers, war) hit financial stability and can affect foreign-exchange inflows to the state budget.

5. **Public distrust.** A prevalent "fear of bigness" narrative depicts large firms as destroying small businesses, using non-market mechanisms, and operating opaquely. While emotionally charged, this is reinforced by real resource asymmetries between large companies and small producers.

Thus, alongside undeniable advantages, there are serious challenges that require state regulation and balancing the interests of different producer categories.

6.6. Section conclusions

The current stage in the development of Ukrainian agriculture is marked by a shift from mere land consolidation to **deeper forms of integration and cooperation**. Large companies increasingly act not as competitors but as **partners** to mid-sized producers, providing access to technology, finance, and markets.

This evolution reflects a natural **maturation** of the sector. Having accumulated critical mass in resources and competencies, large companies begin to act as **technological and innovation centers** for the entire agricultural sector—testbeds for new technologies and drivers of modernization.

Future development will hinge on balancing **global competitiveness** with **local development needs**, economic efficiency with **social responsibility**, and intensification with **sustainability**. Successful integration into the European economic space will require evolutionary adaptation while simultaneously creating opportunities for **small and medium-sized agribusinesses**.

7. Strategic role of different farm categories in ensuring domestic food security and Ukraine's export potential

Ukraine's food security sits at the intersection of domestic production, consumption, and export capacity. In **2024**, despite wartime challenges, the agricultural sector remained resilient, producing **UAH 1.078 trillion** in constant prices. Although this is **19.8%** below the pre-war level, the sector continues to perform a critical function for **domestic and global food security** through sustained exports.

Exports, in turn, remain a driver of macroeconomic stability. In **2024**, agricultural exports totaled **USD 24.5 billion**, providing **59.1%** of Ukraine's total merchandise exports. This underscores the sector's critical role in generating foreign exchange and stabilizing the macroeconomy under wartime conditions. Ukraine has retained its position among leading global exporters, being **No. 1 in sunflower oil and meal, No. 4 in maize, and No. 6 in wheat**.

7.1. The role of farm categories in exports of key products and food security

The contributions of different categories of producers to food security are usually unequal. Conventional wisdom is that enterprises dominate in the production of export-oriented commodities; household farms are the main suppliers for the domestic market; and farmers occupy an intermediate niche, balancing between the two. But is this really the case?

To assess this, we had to consider that the data for a clear breakdown of contributions to domestic consumption and exports among primary agricultural producer categories is partly unavailable. We therefore applied the **three-stage methodology** designed to provide **estimated shares** of each producer category to domestic consumption and actual exports. Our approach is based on an analysis of the **balances**

of production and consumption of agricultural commodities, which enables tracing the movement of production from the producer to the final consumer (or export channel).

- **Stage one** uses national balances for specific products. At this level, the overall picture is established: total national production, the share exported, and the share used domestically for various purposes. This provides the framework for further calculations.
- **Stage two** distributes production at the level of each producer category by self-consumed and marketed production. It accounts for the fact that not all output enters the market—some is retained for internal needs such as animal feed, processing, or household consumption. The balance of supply, on-farm use, and market purchases defines the **net market supply**—that is, the real volume each category can deliver to the market.
- **Stage three** determines each category's estimated contribution to the exports and domestic consumption. Total exports and domestic consumption are distributed among categories in proportion to their share of the total net market supply.

Important caveat: the export contribution is not an assessment of actual exports by that farm category. It is an **estimate** of the share of production of that category that can be actually exported (with the remainder being accordingly supplied for domestic consumption).

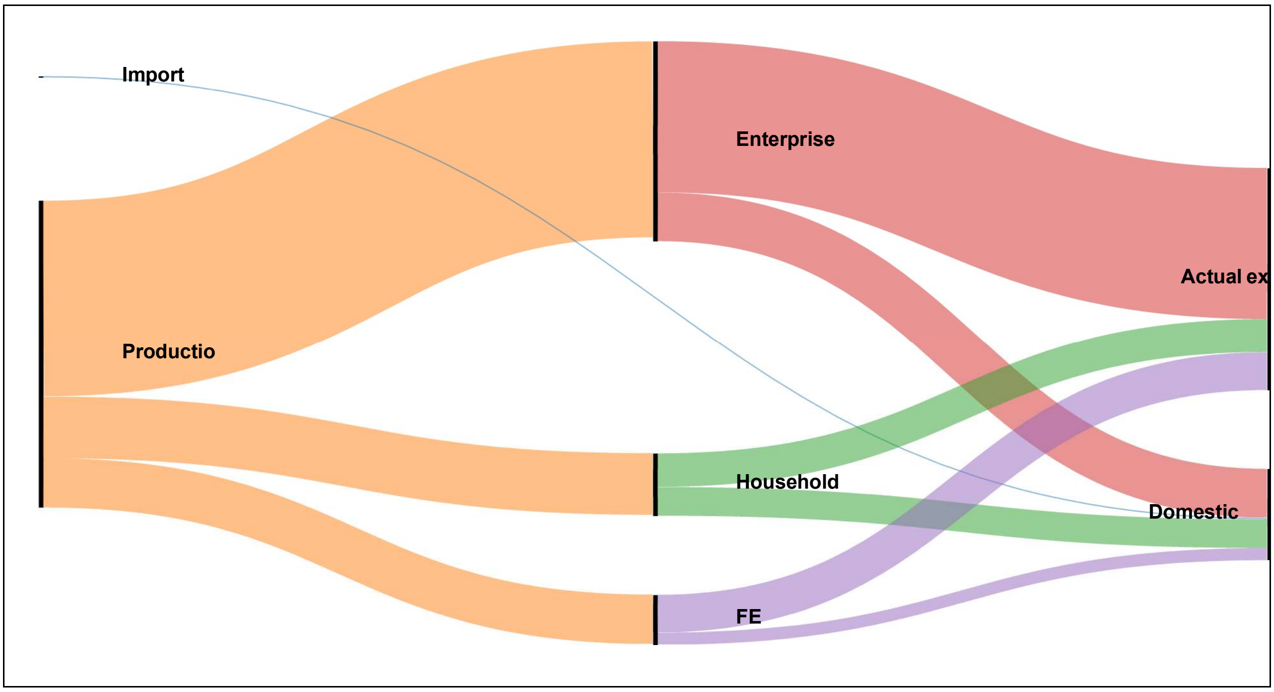
Grain crops

- Enterprises provide a balanced contribution: 53.5% of domestic consumption and 68.0% of actual exports.
- Households play a significant role in domestic consumption (31.8%), primarily by covering feed demand, but contribute only slightly to exports—just 15.0%.
- Farmer enterprises show comparable shares in both areas: 17.0% of exports and 13.4% of domestic consumption.

This structure defies the stereotype that large enterprises are exclusively export-oriented while households secure domestic food security. Enterprises play the dominant role in both exports and domestic consumption.

Estimated contribution of producer categories to domestic consumption and exports of grain, 2023/24 marketing year, %

	Enterprises	Households	FEs
Domestic consumption	53.5%	31.8%	13.4%
Actual exports	68.0%	15.0%	17.0%



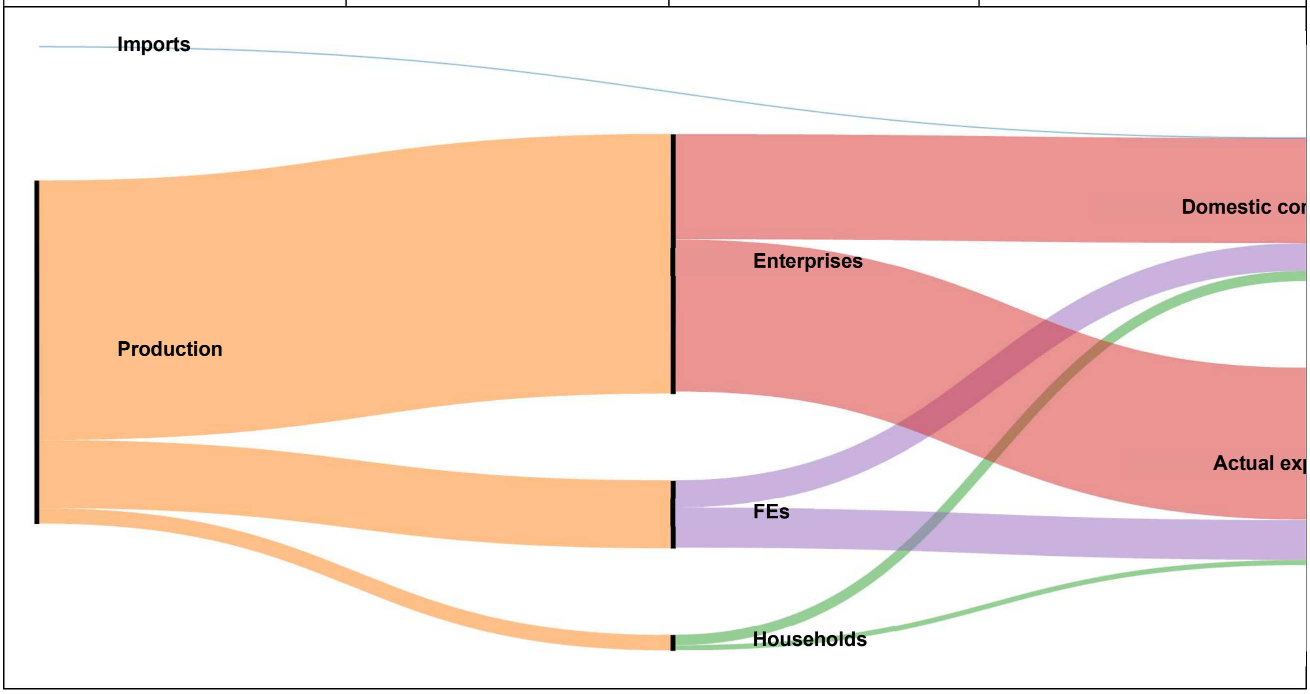
Source: State Statistics Service of Ukraine; authors' calculations

Soybeans

- Dominant position across all market segments: enterprises account for 77.2% of exports and nearly three-quarters of soy supplies for domestic processing.
- Minimal role of households (2.5% of exports): explained by the technological complexity of soybean cultivation.
- Farmer enterprises occupy a notable niche (around 20% of combined domestic and export supplies), specializing in this high-margin crop.

Estimated contribution of producer categories to domestic consumption and exports of soybeans, 2023/24 marketing year, %

	Enterprises	Households	FEs
Domestic consumption	73.6%	7.3%	19.1%
Actual exports	77.2%	2.5%	20.3%



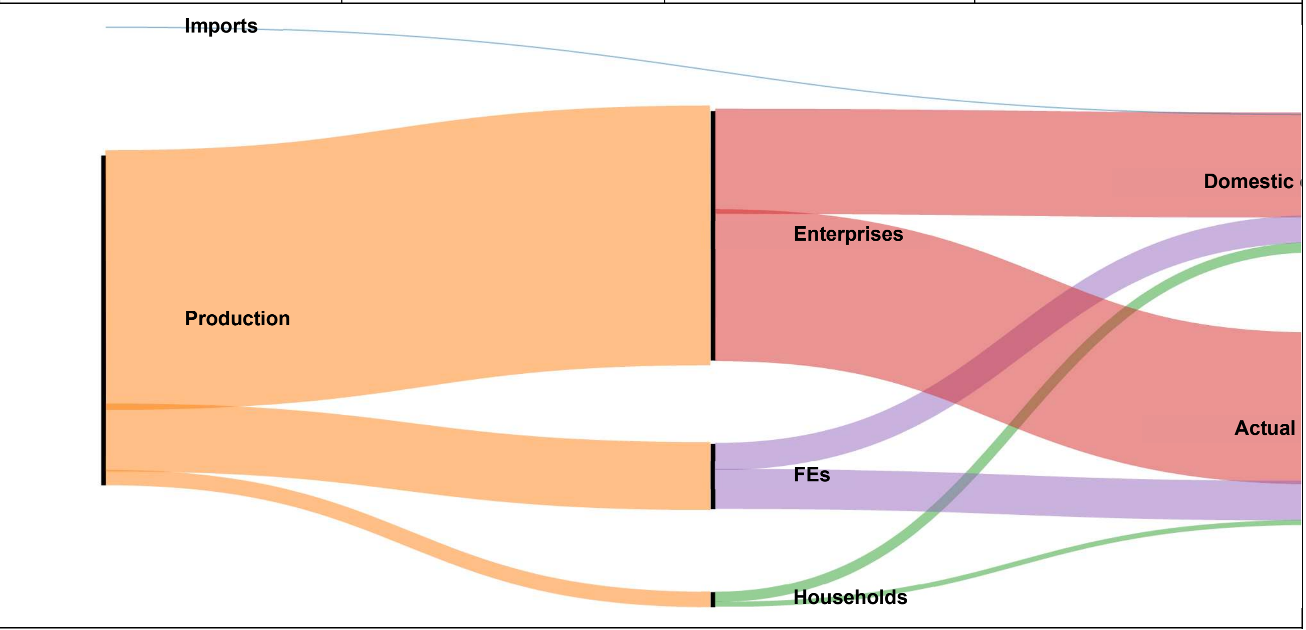
Source: State Statistics Service of Ukraine; authors' calculations

Rapeseed:

- The structure is almost identical to soybeans: enterprises dominate (78% of exports and 75% of domestic supply) while households contribute minimally.
- High technological requirements and the need for specialized machinery create barriers to entry for small-scale producers.

Estimated contribution of producer categories to domestic consumption and exports of rapeseed, 2023/24 marketing year, %

	Enterprises	Households	FEs
Domestic consumption	75.4%	1.0%	22.7%
Actual exports	78.1%	0.3%	21.6%



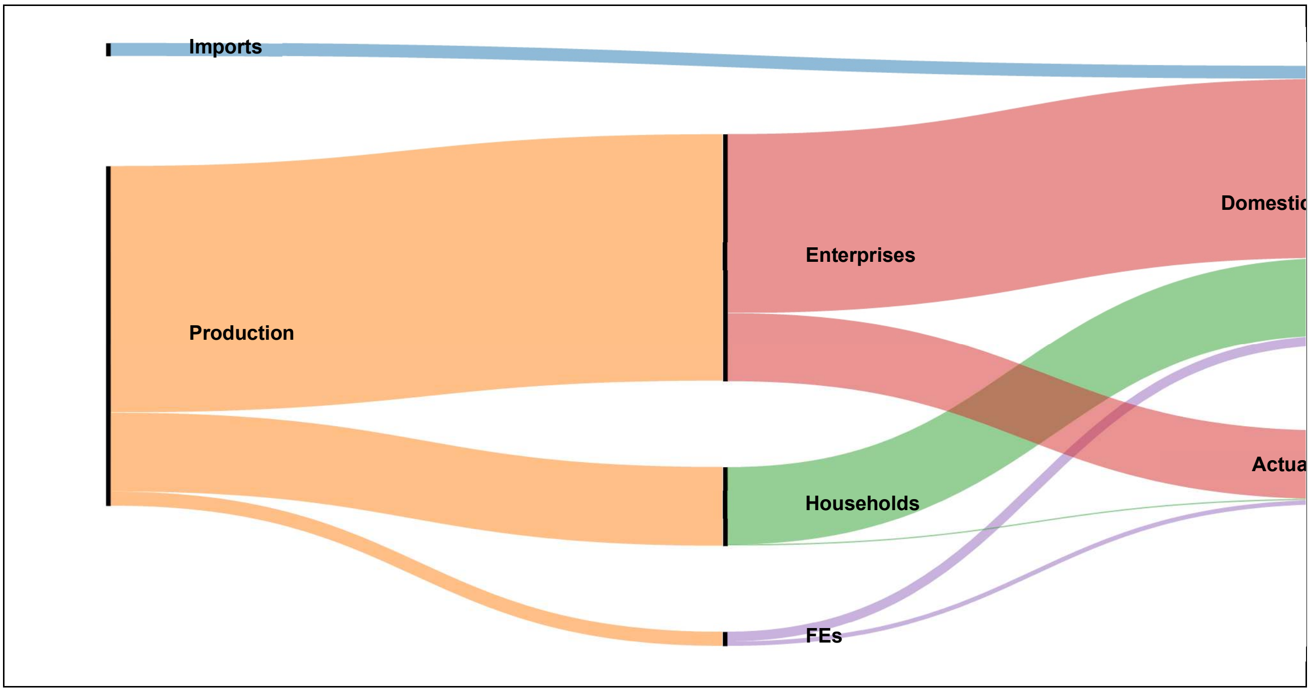
Source: State Statistics Service of Ukraine; authors' calculations

Meat:

- **Highest export concentration among all products:** enterprises control 93.1% of exports.
- **Households provide 27.9% of domestic consumption** but are practically absent in exports (less than 1%).
- This reflects the **industrial character of meat production**, primarily poultry.

Estimated contribution of producer categories to domestic consumption and exports of meat, 2024, %

	Enterprises	Households	FEs
Domestic consumption	64.1%	27.9%	3.5%
Actual exports	93.1%	0.7%	6.2%



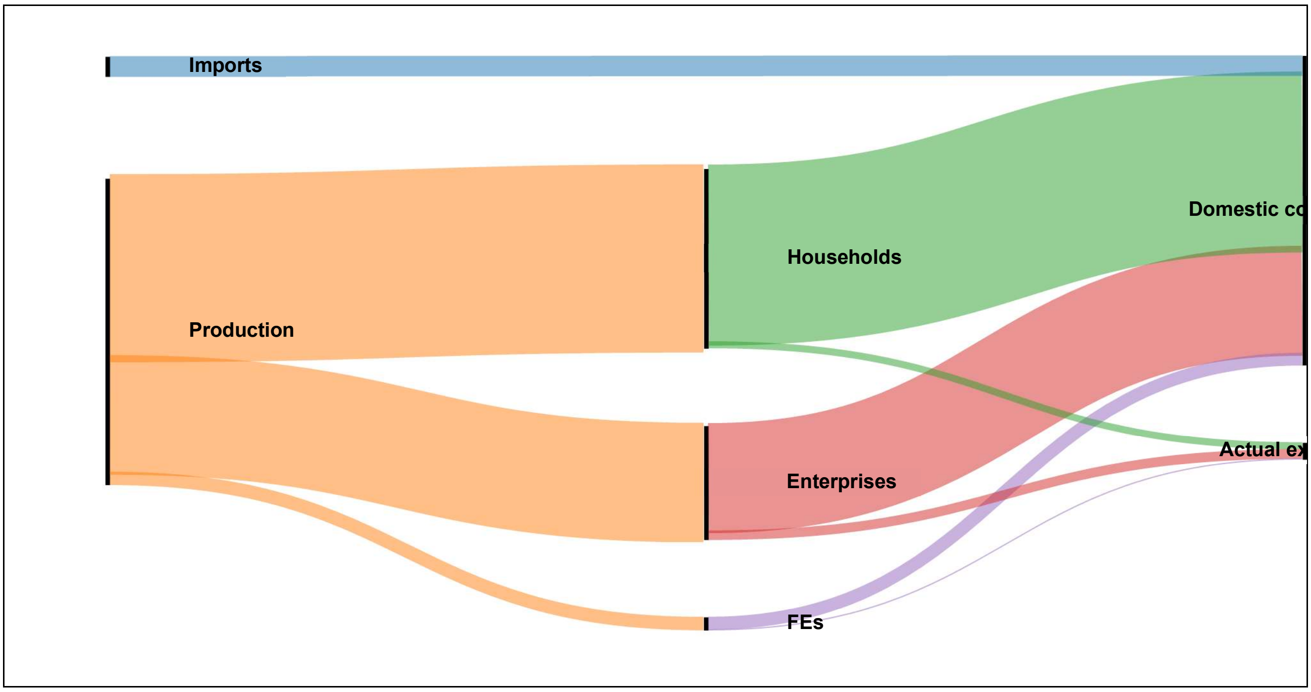
Source: State Statistics Service of Ukraine; authors' calculations

Milk:

- A uniquely structured sector: households supply 55.8% of domestic consumption and about 40% of the raw milk used in processing for export products.
- This is the only segment among core agri-food markets where household production directly affects Ukraine's export presence on global markets.

Estimated contribution of producer categories to domestic consumption and exports of milk, 2024, %

	Enterprises	Households	FEs
Domestic consumption	33.9%	55.8%	3.9%
Actual exports	55.1%	39.6%	5.2%



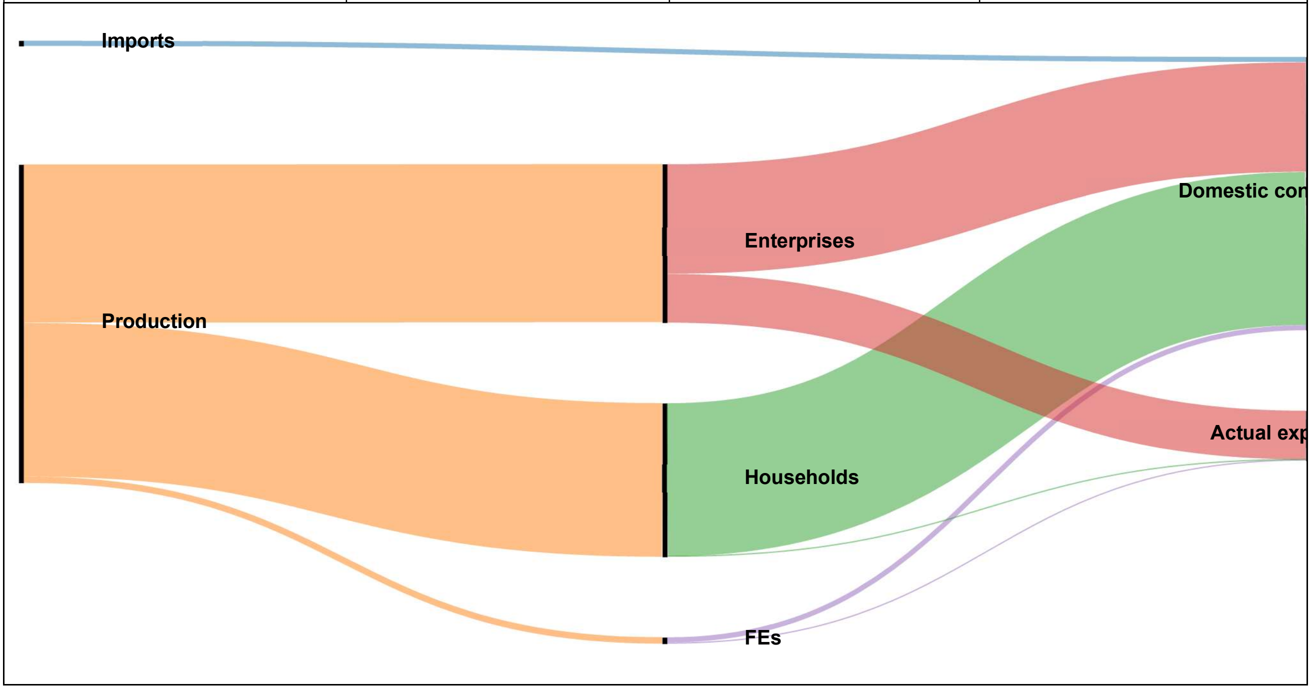
Source: State Statistics Service of Ukraine; authors' calculations

Eggs:

– Households dominate domestic consumption (56.0%).
– Exports are almost entirely controlled by enterprises (97.5%).
– This reflects a dual structure: household production for self-consumption and industrial production for exports.

Estimated contribution of producer categories to domestic consumption and exports of eggs, 2024, %

	Enterprises	Households	FEs
Domestic consumption	40.2%	56.0%	1.9%
Actual exports	97.5%	0.0%	2.5%



Source: State Statistics Service of Ukraine; authors' calculations

7.2. Section conclusions

The analysis shows the **dominance of enterprises in ensuring both export potential and domestic food security** across most key markets.

The role of households proves to be much smaller than traditionally assumed—they remain significant only in milk and egg production for domestic consumption. In grain, oilseeds, and meat, enterprises provide the bulk of the domestic supply as well as exports.

Farmer enterprises occupy an adaptive intermediate niche, focusing on high-margin crops (soybeans, rapeseed) and balancing between domestic and export markets.

This structure calls for a reconsideration of traditional agricultural policy approaches, where support for households is often justified by their assumed role in food security. Current evidence indicates the need to focus more on enhancing the efficiency of enterprises as the primary guarantors of the country's food supply.

8. Overview of the agricultural structure in EU countries

The agricultural sector of the EU is highly diverse, reflecting the historical, geographical, and political particularities of its 27 member states (28 until 2020). The structure of agricultural production in the EU was shaped by economic transformations, particularly the introduction of the **CAP** and the accession of Central and Eastern European countries (CEE/EU-13). While the structure continues to evolve, it remains largely **path-dependent** and influenced by past policy decisions.

8.1. Dynamics of farm quantities and land consolidation

Over the past two decades, the EU has seen a persistent decline in the total number of farms. Between 2007 and 2016, the number of farms decreased by an impressive 24%, or about 3.5 million farms. By 2016, there were 10.47 million farms in the EU, falling further to 9.1 million by 2020.

At the same time, the total area of agricultural land in the EU remained almost unchanged. This led to a sharp increase in the **average farm size**: from 12.6 ha in 2007 to 16.6 ha in 2016 (+32%), and further to 17.4 ha in 2020.

The process of **land concentration** is evident and particularly pronounced in key agricultural producers such as Germany, Denmark, France, and Spain.

8.2. Distribution by land area

The farm structure in the EU is strongly polarized, with the following features:

1. **Dominance of very small farms (by quantity of farms).** In 2020, farms smaller than 5 ha accounted for about 63.8% of all EU farms. Yet these farms cultivated only 5.8% of the EU's total agricultural land. This segment is most prevalent in the EU-13, especially Romania (90.3% of farms), Cyprus (87.5%), and Italy (64.1%).
2. **Land concentration in large farms.** Farms of 50 ha or more made up only 7.5% of EU farms in 2020. However, these farms cultivated 68.2% of all EU agricultural land. The number of farms with 100+ ha increased by 12.2% between 2007 and 2016, and by 2016, they cultivated more than 50% of all EU farmland. The highest concentration of land in large farms is observed in EU-13 countries, where farm structures evolved from former collective farms: in the Czech Republic and Slovakia, the largest enterprises control nearly 90% of farmland. In Western Europe (e.g., France and Germany), large farms also show significant concentration, cultivating around 60% of farmland.

8.3. Regional differences (EU-15 vs. EU-13)

Structural transformation in the EU-13 (CEE countries) differs substantially from the EU-15 (older members):

- **EU-13:** In 2016, these countries accounted for 57.3% of all EU farms but only 28.5% of farmland. The average farm size was just 8 ha. Farm structures remain fragmented, with a high share of small farms (88.2% classified as small).
- **EU-15:** These countries represented 42.7% of EU farms and 71.5% of farmland. The average farm size was much larger—28 ha.

8.4. Economic size by standard output

Analysis of **economic size by standard output (SO)** also confirms significant disparities. In 2020, the average economic size of an EU farm was €38,703. The highest averages were recorded in Germany (€167,631) and France (€158,430), reflecting a high level of industrialization and efficiency. The lowest averages were in Romania (€4,029) and Poland (€19,680).

8.5. Section conclusion

Despite the decline in farm numbers and the increase in average size, EU countries retain a **dualistic agricultural structure**: the **numerical dominance of small and very small farms**, which cultivate only a small share of land, versus the **economic dominance of large farms**, which control most farmland and generate the majority of output.

Further structural transformation, driven by the CAP and the requirements of the **European Green Deal**, is likely to reinforce consolidation trends, particularly in the EU-13, where small-scale farming still prevails.

More detailed information on the development of the EU's agricultural structure is provided in **Appendix A** at the end of this report.

9. Conclusions and policy implications

9.1. Conclusions on the purpose and methodology of the study

These materials are the result of many years of work by the authors to gather information from archival sources at national, regional, and enterprise levels. This made it possible, for the first time, to carry out a systematic analysis of the development of the structure of Ukraine's agricultural producers over several decades and to set out in detail the diversity of producers, going beyond stereotypical perceptions.

The study aimed to conduct a comprehensive screening of business entities in Ukraine's agricultural sector to form a clear, transparent, and structured understanding of the sector's internal organization in the context of EU integration and post-war recovery.

The study seeks to overcome the lack of a nuanced understanding of the structural features of Ukraine's agriculture, especially over time and with due regard to wartime transformations, and to lay the groundwork for further analytical work and practical solutions.

The methodology is based on SSSU data on production in constant prices, which ensures comparability over time and across producer categories. An expanded three-tier classification of producers (small, medium, large) is applied, aligned with new legislative initiatives and EU standards. Beyond production contribution, the study groups entities by agricultural land area, enabling a multidimensional view of the sector.

At the same time, methodological constraints are acknowledged, including partial data availability—especially for small producers—and the absence of information from occupied territories. The authors also recognize that structural analysis of enterprises is not comprehensive without considering the dynamics of performance across producer categories. However, such analysis was beyond the scope of this work and requires a separate future study.

9.2. Summary of the findings of the study

9.2.1. Structural transformation of Ukraine's agricultural sector

The analysis refutes the dominant notion that Ukrainian agriculture is polarized solely between large structures and small producers. The study reveals a more complex structure in which **medium-sized farms in the commercial segment** (average farm—**1,493 ha per entity**) play a defining role, operating **41%** of agricultural land.

The relatively large sizes of Ukrainian agricultural enterprises are not the result of recent consolidation, but reflect the historical legacy of the Soviet period, preserved over three decades of independence. The **average size** of a producer in the commercial segment increased from **479 ha in 2010** to **649 ha in 2024**, which remains significantly above European levels but corresponds to Ukraine's historical development path.

Concentration is sub-sectoral rather than economy-wide. Capital-intensive verticals (poultry, pig production, sugar beet, etc.) display higher levels of concentration and integration due to requirements for biosecurity, processing, and quality control. By contrast, the grain, oilseed, and fruit-vegetable segments retain competition and a diversity of business models.

The full-scale invasion has also accelerated the decline in the role of **households** due to demographic losses and the breakdown of economic linkages.

9.2.2. The roles of different producer categories

The study dispels the stereotype that **households** ensure domestic food security while **enterprises** focus on exports. In fact, **commercial enterprises** dominate both exports **and** domestic supply in most key markets.

Enterprises and farmer enterprises are the backbone of commercial production, providing **71%** of total production in 2024. They dominate in the production and export of grains, oilseeds, and meat.

The role of **households** in general food security is steadily declining amid the professionalization and commercialization of the agri-food sector. While still important for self-provisioning, their share of production is shrinking due to structural factors (population aging, urbanization) and trends toward industrialization and higher productivity. The war also inflicted the largest relative losses on them compared to other producer categories. The **households' share of production** has steadily decreased (from **43.6% in 2010** to **29.0% in 2024**). At the same time, households remain important for supplying the domestic market with **milk, eggs, and fruit and vegetable products**.

Farmer enterprises occupy an intermediate niche, focusing on high-margin crops (**soybeans, rapeseed**) and balancing between domestic and export markets. By count, they are the most numerous group (**68.6%**), but control roughly **a quarter** of agricultural land.

Particularly indicative is the structure of the country's **export**. With total agricultural exports of **$24.5 billion** (59% of Ukraine's merchandise exports), the commercial segment provides: **85%** of grain exports, **97.5%** of soybean exports, and **99.3%** of meat exports. Households retain significance only in milk production, supplying **40%** of the raw material for export-oriented products.

Overall, the study records dynamic changes in the **medium-sized enterprise** segment: both their numbers and their share in total production have increased in recent years. This points to a sectoral "treadmill," where progress requires constant adaptation and scaling. **Large agricultural companies** partly act as drivers of this process thanks to superior technological capabilities.

9.2.3. Integrated companies as a specific structural element

The share of integrated agricultural companies–often referred to as agroholdings–in farmland has stabilized over the past decade, especially after the 2013 global food crisis, when priorities shifted to intensification and efficiency rather than expanding land area.

Integrated agricultural companies should not be perceived solely as monolithic enterprises over 10,000 ha. They typically consist of several legally separate units of varying size, connected by ownership relations and managed by a parent company. At the same time, the data records a significant number of single and related enterprises with land areas exceeding **10,000 ha** that openly declare their scale without splitting into smaller structures. Such transparency indicates that concealing land ownership is **not** dominant in Ukraine. These enterprises control **23%** of land—**not** a critical level of concentration at the national scale.

9.2.4. Employment and the social function

Structural employment analysis refutes the widespread myth that large and medium-sized enterprises create few jobs. **Farms with over 1,000 ha** provide **almost 75%** of official jobs in the commercial agricultural sector. This reflects the historical development of Ukrainian rural areas based on large collective farms employing hired labor.

The **land-per-worker** indicator stabilizes at **45–60 ha** for farms over **500 ha**, indicating a technological optimum regardless of size in the medium and large segments. Land load per worker in small enterprises (**15–35 ha per worker**) is comparable to figures in major EU economies (Germany, France).

Another structural feature concerning employment is that **large and medium Ukrainian enterprises provide significantly more jobs than the average farm enterprise in the EU**, underscoring their social role. In large integrated companies, some jobs are in rural divisions and some in urban offices. Medium enterprises, by contrast, are mostly rural-based, directly supporting local labor markets.

Given the lack of a strong tradition of commercial family farming, large and medium enterprises also serve as "**universities**" for young people, providing experience and knowledge of modern technologies.

At the same time, the sector constantly faces a shortage of qualified personnel due to demographic aging and out-migration from villages. As the main rural employment sources are agriculture and low-paid services, the attractiveness of these areas for employment remains limited.

9.2.5. Classification constraints

The absence of a **unified, specialized** classification of agricultural producers creates a systemic problem. The classification proposed in draft law No. 13202-1 and other current approaches introduce distortions.

Defining categories by **total revenue**—including non-agricultural activities—leads to misclassification. An **agricultural taxonomy** is needed, based on: **agricultural revenue, land area, asset value, and agricultural employment**.

Data and statistics are a critical bottleneck. The absence of a full agricultural census and the suspension of field surveys during wartime limit estimation accuracy, complicating the targeting of support and monitoring the effects of policy measures.

9.3. Structural implications for public policy and EU integration

EU integration requires not merely harmonizing rules, but aligning **support instruments** with the **actual structure** of Ukraine's agricultural production. Given the predominance of medium farms and sub-sectoral concentration, policy must be differentiated by producer category and specialization, and embed **transparency and competition** as baseline principles for regulating multi-entity groups.

An important element is the **integration of employment** into agricultural policy. Job support—e.g., incentives for investment in housing, transport, and worker training—should be treated as part of the toolkit for resilient rural territories and alignment with European approaches to rural development.

Simply copying CAP mechanisms is questionable, if not impossible; a balance is needed between supporting the export potential of large farms and the **social function** of smaller ones.

9.4. Policy recommendations

9.4.1. Recommendations for Ukraine

1. **Develop a specialized classification of agricultural producers.** The new system should include sector-specific criteria to avoid methodological distortions identified in draft law No. 13202-1. The study underscores the need to unify enterprise classification: current approaches distort data by including non-agricultural revenues. A legally enshrined agricultural taxonomy is required, based on agricultural revenue, land area, and number of agricultural workers, applying a "two out of three" rule for categorization. This will improve alignment between policy and statistics. A differentiated, sub-sectoral approach should also include an asset-value criterion—particularly for landless enterprises that predominate in industrial livestock production.
2. **Differentiate support by producer category.** Given the dominant role of medium farms in the commercial segment in production and land use, create specialized support instruments for farms of 200–5,000 ha, including both corporate and farmer enterprises. Eligibility should account for not only land area but also production output and employment, to avoid distortions from non-agricultural revenues.
3. **Apply a realistic approach to supporting households.** In view of the decline in households' role in total production (from 43.6% to 29%), policy should strike a balance between supporting specialized pathways of commercialization and promoting social measures, including those aimed at expanding non-agricultural employment.
4. **Introduce mechanisms for balanced development.** Policy should prevent excessive land concentration, support a competitive environment, and encourage cooperation models among large, medium, and small producers. Implementing unique identifiers in the State Agrarian Registry will enable tracing real ownership structures and prevent abuse in receiving public support.
5. **Integrate employment into agricultural policy.** Employment should be a distinct policy component: large and medium enterprises provide substantial jobs, yet face

shortages due to demographic issues. Incentives such as support for worker housing and transport, and pooled training resources will help address this.

6. **Modernize information systems.** A priority is to conduct an agricultural census in safe regions after the end of the active phase of the war. This should be a top priority thereafter to obtain objective information and enable data-driven policy. A phased approach is recommended—from registry integration to a modular census, annual surveys, and dashboarding for monitoring dynamics.

9.4.2. Recommendations for the European Union

1. **Acknowledge the structural uniqueness of Ukraine's agricultural sector.** In setting integration conditions, recognize that Ukraine's model differs markedly from the EU average; applying standard CAP rules without adaptation could be disruptive.
2. **Adapt support instruments to Ukraine's specific context.** Pre-accession programs should reflect Ukraine's structural features, where medium farms are historically larger than in the EU and concentration is sub-sectoral. Assistance programs should establish a "Ukrainian benchmark" for defining producer categories based on a combination of area, revenue, assets, and employment, rather than mechanically applying EU thresholds. In concentrated segments, focus on market-conduct regulation.
3. **Recognize employment as a component of rural development.** EU support should go beyond the traditional focus on small farms and include programs to maintain and create jobs in medium and large enterprises via co-financing of infrastructure projects and vocational training.
4. **Harmonize data systems.** A joint EU–Ukraine plan is needed to implement European statistical standards, including technical support for the agricultural census and integration of Ukrainian accounting systems with European monitoring platforms.

9.5. Final provisions

The structure of Ukraine's agricultural sector reflects a unique blend of historical legacy, market transformation, and adaptation to global challenges. Successful integration into the European economic space will require balancing the **competitive advantages of large-scale production** with the development of a **diversified structure** capable of ensuring both economic efficiency and the **social stability** of rural areas.

The proposed recommendations aim to create this balance through a **differentiated policy** that accounts for the real role and potential of each producer category in ensuring **food security** and **exports**.

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[7] LFM = Large Farm Management.

Appendix A

The data indicate substantial differences in farm structures across EU countries (see Table A1). In Southern and Eastern Europe (Romania, Greece, Bulgaria, Italy, Poland), **small farms up to 10 ha** dominate, whereas in Western and Northern Europe (France, Germany, Denmark, Sweden, Finland) the **share of large farms over 100 ha** is significantly higher.

Table A1. Share of farms in EU countries by landholding size class in 2020, %

Country	0–4.9 ha	5–9.9 ha	10–19.9 ha	20–29.9 ha	30–49.9 ha	50–99.9 ha	≥100 ha
Belgium	13.53	13.00	17.53	12.44	17.08	18.86	7.56
Bulgaria	64.03	9.21	7.39	4.29	5.01	4.32	5.75
Czechia	25.25	15.19	14.87	8.02	8.89	10.48	17.30
Denmark	18.71	18.58	14.80	8.01	9.01	11.22	19.68
Germany	8.17	17.04	20.01	9.53	13.70	17.03	14.52
Estonia	10.38	25.59	19.88	8.80	9.15	9.15	16.97
Greece	74.04	13.39	7.02	2.54	1.92	0.90	0.20
Spain	51.55	14.42	11.32	5.51	5.58	5.52	6.10
France	19.65	8.72	9.41	6.15	10.11	19.82	26.14
Croatia	70.61	14.83	7.09	2.43	2.22	1.79	1.04
Italy	64.11	14.13	9.67	3.98	3.63	2.87	1.61
Cyprus	87.52	5.90	3.05	1.17	1.06	0.88	0.47
Latvia	46.96	19.12	14.37	5.35	4.73	4.06	5.42
Lithuania	50.17	19.90	12.92	4.66	3.86	4.10	4.38
Luxembourg	16.49	8.51	8.51	5.32	9.04	25.00	27.66
Hungary	64.89	11.82	8.42	3.55	3.48	3.44	4.41
Netherlands	19.95	13.09	15.39	10.64	17.14	17.97	5.85
Austria	20.81	17.00	23.00	13.71	14.52	8.81	2.17
Poland	52.29	21.70	14.79	4.71	3.41	2.03	1.08
Portugal	73.39	11.19	6.54	2.41	2.12	1.91	2.44
Romania	90.32	5.58	1.95	0.63	0.59	0.39	0.55
Slovenia	61.94	21.58	10.97	2.93	1.66	0.76	0.19
Slovakia	39.94	18.59	12.63	5.60	5.40	5.20	12.68
Finland	3.07	13.46	19.31	13.48	17.40	20.27	13.04
Sweden	10.75	25.17	20.22	9.27	9.78	11.16	13.68

Source: Smedescu et al. (2023), based on Eurostat 2023.

During 2010–2020, the EU experienced an overall decline in agricultural area (Table A2). Country trends diverged: in France and Poland, utilized agricultural area (UAA) remained stable or even rose, whereas Romania saw a notable contraction (–9.2%). This underscores the structural differences in land use and the need to account for national specificities when designing agricultural policy.

Table A2. Dynamics of agricultural area in selected EU countries, 2010–2020, million ha

Country	2010	2013	2016	2020	2020/2010 (%)
EU	170.02	174.60	171.28	157.40	92.50
France	27.09	27.74	27.81	27.40	101.14
Spain	23.75	23.30	23.22	23.90	200.63
Germany	16.70	16.70	15.16	16.60	99.40
United Kingdom	15.92	17.32	16.67	–	–
Poland	14.38	14.41	14.40	14.80	102.92
Romania	13.30	13.05	12.50	12.08	90.82
Italy	12.88	12.09	12.09	12.50	97.04
Total	124.02	124.61	121.85	108.00	87.08

Source: Popescu (2023), based on Eurostat 2022.

The data also show a steady decline in the **number of farms** across the EU during 2005–2020 (Table A3), including in the largest producers. The most pronounced changes were recorded in Poland (–47%) and Romania (–32%), while Spain saw a slower contraction (–15%). Overall, these countries' share of EU UAA remained stable—around 75%—highlighting both their key contribution to land use and the synchronized decline in farm numbers across the EU.

Table A3. Dynamics of farm quantities in selected EU countries with the largest UAA, 2005–2020, million farms

Country	2005	2007	2010	2013	2016	2020	2020/2005 (%)
EU	14.37	13.58	12.05	10.84	10.32	9.10	63.32
Romania	4.26	3.93	3.86	3.63	3.42	2.88	67.60
Poland	2.47	2.39	1.50	1.43	1.41	1.31	53.03
Italy	1.72	1.68	1.62	1.01	1.11	1.13	65.69
Spain	1.08	1.04	0.989	0.965	0.945	0.919	85.09
France	0.567	0.527	0.516	0.472	0.456	0.393	69.31
Germany	0.389	0.370	0.299	0.285	0.276	0.262	67.35
United Kingdom	0.285	0.300	0.202	0.185	0.185	–	–
Total	10.77	10.24	8.986	7.975	7.802	6.894	64.01

Source: Popescu (2023), based on Eurostat, respective years.

A marked increase in **average farm size** has occurred over recent decades (Table A4), most notably in Poland (+72%) and Italy (+65%).

Table A4. Dynamics of average farm size in selected EU countries, 2003–2020, ha

Country	2003	2010	2013	2016	2020	2020/2010 (%)
EU	11.7	14.1	16.1	16.66	17.4	148.71
United Kingdom	57.4	78.6	93.6	99.07	–	–
France	45.3	52.6	58.7	60.9	69.7	153.86
Germany	41.2	55.8	58.6	57.2	63.17	153.32
Spain	22.1	24.0	24.1	24.5	26.12	118.19
Italy	6.7	7.9	12.0	11.97	11.06	165.07
Poland	6.6	9.6	10.1	10.2	11.36	172.12
Romania	3.1	3.4	3.6	3.66	4.42	130.00

Source: Popescu (2023), based on Eurostat, respective years.

The data reveal significant cross-country differences in farm structure (Tables A5 and A6). In Romania, over **90%** of farms are under **5 ha**—far above the EU average—while the share of large farms remains small. By contrast, in France, Germany, and the United Kingdom, **large farms predominate and control over 75%** of UAA. This underscores the EU's dual farm structure and divergent national trajectories.

Table A5. Share of the smallest farms (<5 ha) and the largest farms (≥50 ha) by number of farms and share of UAA in selected EU countries, 2016, %

Country	Indicator	Farms <5 ha	Farms ≥50 ha
EU	Number of farms	65.4	7.0
	UAA	6.1	68.0
Romania	Number of farms	91.8	0.5
	UAA	28.7	51.1
Poland	Number of farms	54.3	2.4
	UAA	13.2	31.6
Italy	Number of farms	58.7	4.5
	UAA	11.4	44.0
Spain	Number of farms	51.6	10.8

	UAA	4.3	70.8
France	Number of farms	24.3	41.3
	UAA	0.8	86.9
Germany	Number of farms	8.7	30.5
	UAA	0.3	78.3
United Kingdom	Number of farms	10.2	38.6
	UAA	0.3	88.2

Source: Popescu (2023), based on Eurostat, respective years.

Table A6. Farm structure by landholding size in selected EU countries, 2020 (%)

Size class (ha)	EU	Romania	Poland	Italy	Spain	France	Germany
Total farms (units)	9,070,970	2,887,070	1,302,330	1,133,020	914,870	393,030	262,780
Share of farms by landholding size class (%)							
Landless	1.39	1.57	0.32	1.10	0.87	1.14	1.49
<2	41.16	70.76	18.61	38.60	28.72	9.72	3.64
2–4.9	21.23	17.99	33.35	24.33	21.95	8.77	3.04
5–9.9	12.36	5.58	21.69	14.13	14.41	8.72	17.03
10–19.9	8.70	1.96	14.79	9.66	11.32	9.41	20.00
20–29.9	3.76	0.63	4.71	3.98	5.51	6.14	9.53
30–49.9	3.90	0.58	3.40	3.63	5.57	10.11	13.70
50–99.9	3.85	0.38	2.02	2.86	5.52	19.81	17.02
≥100	3.65	0.55	1.11	1.71	6.13	26.18	14.55

Source: Popescu (2023), based on Eurostat 2022.

There is marked **polarization** between farm numbers and land control (Table A7). In Romania, over **90%** of farms are under **5 ha** and control about **23%** of land, while farms over **100 ha** are only **0.6%** of all farms, yet they cultivate nearly **half** of UAA. In France and Germany, large farms concentrate **over 60%** of the land, reflecting higher levels of concentration and specialization.

Table A7. Shares of farms (by number) and of UAA by land-size class in selected EU countries, 2020, %

Size class (ha)	Indicator	EU	Romania	Poland	Italy	France	Germany	Spain
0–4.9	% farms	63.8	90.3	52.3	64.1	19.6	8.2	51.6
	% UAA	5.8	22.8	11.7	10.3	0.5	0.22	3.8
5–9.9	% farms	12.4	5.6	21.7	14.1	9.7	17.0	14.4
	% UAA	5.8	8.5	13.6	8.9	0.9	1.95	3.9
10–19.9	% farms	8.7	1.9	14.8	9.7	9.4	20.0	11.3
	% UAA	7.0	6.0	18.0	12.1	1.9	4.71	6.1
20–29.9	% farms	3.8	0.6	4.7	4.0	6.1	9.5	5.5
	% UAA	5.3	3.5	10.0	8.7	2.2	3.75	5.2
30–49.9	% farms	3.9	0.6	3.4	3.6	10.1	13.7	5.6
	% UAA	8.7	5.2	11.4	12.5	5.8	8.51	8.2
50–99.9	% farms	1.9	0.4	2.0	2.9	19.8	17.0	5.5
	% UAA	15.7	6.1	12.1	17.8	20.9	19.11	14.9
≥100	% farms	3.6	0.6	1.1	1.6	26.1	14.5	6.1
	% UAA	52.5	47.8	23.2	29.7	67.8	61.75	57.8
Farms ≥50 ha	% farms	5.5	0.9	3.1	4.5	46.0	31.5	11.6
	% UAA	68.2	54.0	35.3	47.4	88.7	80.86	72.7

Source: Popescu (2023), based on Eurostat 2022.

There is also a substantial gap between **farm counts** and their **economic contribution** across EU countries (Table A8). Romania accounts for the largest share of EU farms (over 31%) but only **3.3%** of EU **Standard Output (SO)**—evidence of the predominance of small, low-productivity farms. Conversely, France and Germany have relatively few farms (4.3% and 2.9%) yet generate large shares of SO (17.7% and 12.5%), indicating high concentration and productivity.

Table A8. Share of selected EU countries in farm counts and in Standard Output (SO), 2020, %

Country	Share in EU farm count	Share in EU SO
Romania	31.8	3.31
Poland	14.4	7.3
Italy	12.5	18.6
Spain	10.1	11.5
France	4.3	17.7
Germany	2.9	12.5

Source: Popescu (2023), based on Eurostat 2022.

Large differences exist in the **distribution of farms by SO size** (Table A9). In Romania, over **70%** of farms produce **less than €2,000**, whereas in France and Germany, **medium and large farms** (over €100,000) predominate. This highlights the EU's dual structure: a high share of low-productivity farms in Eastern Europe versus a higher concentration of economically strong producers in Western Europe.

Table A9. Distribution of farms by Standard Output (SO) class in selected EU countries, 2020, %

SO class (€)	EU	Romania	Poland	Italy	Spain	France	Germany
Total farms (units)	9,070,970	2,887,070	1,302,340	1,133,020	914,870	393,030	262,780
Zero	0.83	0.85	0.66	1.44	0.59	0.17	0.04
<2,000	35.71	71.50	26.00	8.46	17.16	5.50	0.54
2,000–3,999	14.19	13.74	19.65	10.56	14.73	3.40	4.67
4,000–7,999	12.84	7.48	17.59	16.27	16.64	5.14	10.55
8,000–14,999	9.92	3.14	12.32	17.57	13.91	6.94	12.73
15,000–24,999	6.52	1.36	7.82	12.56	9.29	6.74	10.00
25,000–49,999	6.95	1.03	7.90	13.36	10.14	11.36	12.44
50,000–99,999	5.12	0.45	4.81	9.26	8.09	15.35	12.52
100,000–249,999	4.53	0.28	2.33	6.85	6.02	25.71	17.58
250,000–499,999	1.96	0.09	0.58	2.13	1.93	13.52	11.26
≥500,000	1.33	0.07	0.34	1.54	1.50	6.17	7.67

Source: Popescu (2023), based on Eurostat 2022.

There are also large differences in the **distribution of SO by class** (Table A10). In Romania, a large share of SO is concentrated in the smallest classes (up to €7,999), whereas in France, Germany, and Italy, the bulk lies above **€100,000**. Across the EU, **average SO per farm** rose from **€21,000 in 2007** to **€39,000 in 2020** (+85%). Growth was less pronounced in Eastern Europe—for example, in Romania from **€2,400** (2007) to just over **€4,000** (2020), i.e., +66%, with Romania's average SO per farm **ten times lower than the EU average** and **forty times lower** than in France or Germany (see Table A11).

Table A10. Distribution of Standard Output (SO) by SO class in selected EU countries, 2020, %

SO class (€)	EU	Romania	Poland	Italy	Spain	France	Germany
Total SO (million €)	351,079	11,632	25,631	65,353	40,368	62,268	44,368
Shares of farms by SO class (%)							
<2,000	0.77	12.50	1.54	0.16	0.41	0.03	0.004

SO class (€)	EU	Romania	Poland	Italy	Spain	France	Germany
2,000–3,999	1.05	9.44	2.88	0.53	0.97	0.06	0.088
4,000–7,999	1.90	10.12	5.08	1.64	2.17	0.19	0.375
8,000–14,999	2.80	8.20	6.85	3.35	3.47	0.49	0.848
15,000–24,999	3.24	6.24	7.67	4.20	4.08	0.83	1.156
25,000–49,999	6.32	0.51	14.12	8.15	8.16	2.60	2.646
50,000–99,999	9.29	7.56	16.82	11.25	12.88	7.08	5.368
100,000–249,999	18.18	9.80	17.25	18.09	20.28	26.33	16.902
250,000–499,999	17.13	7.47	9.27	12.63	13.72	29.03	22.840
≥500,000	39.32	20.15	18.52	40.00	33.86	33.36	49.776

Source: Popescu (2023), based on Eurostat 2022.

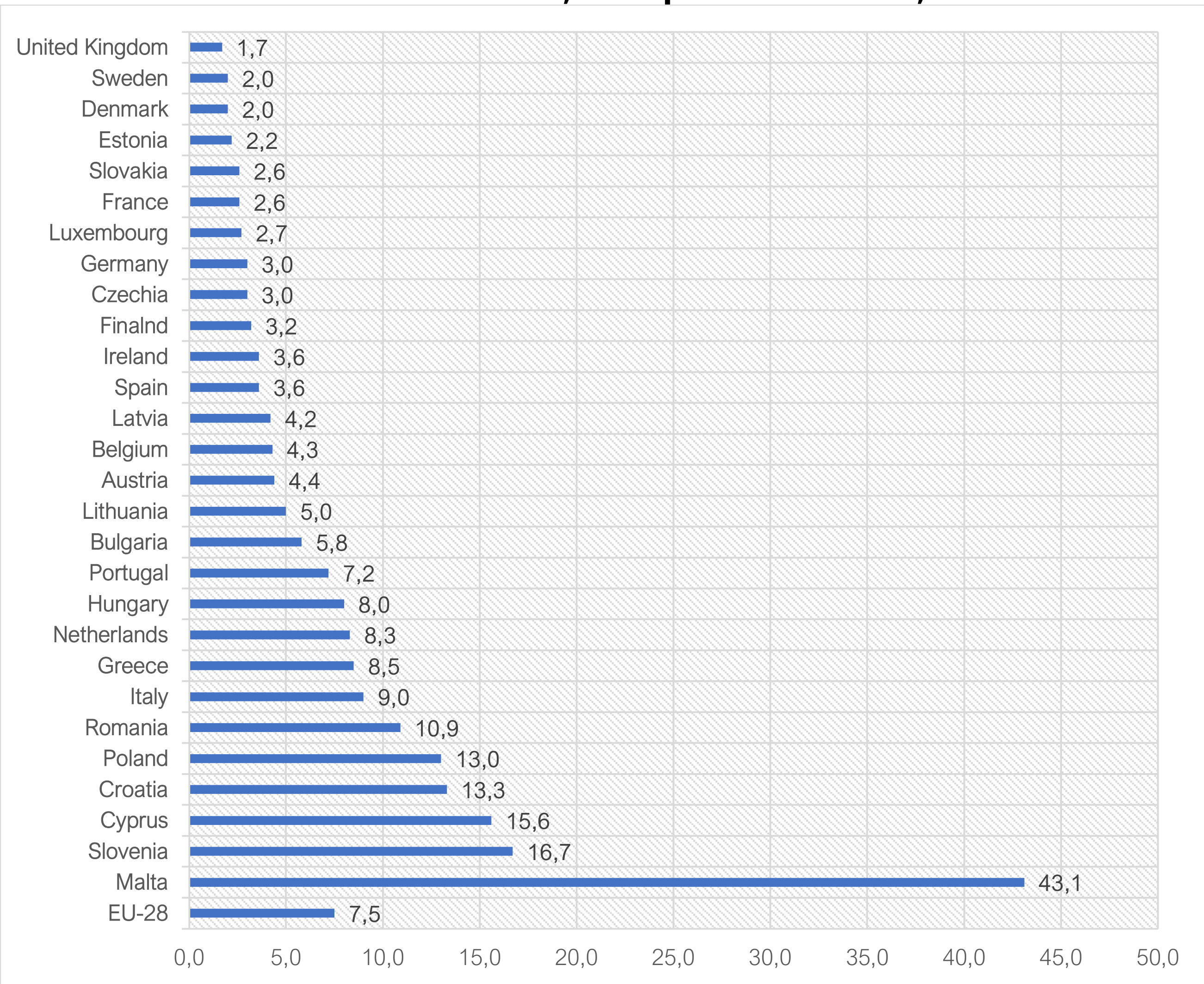
Table A11. Average Standard Output (SO) per farm by SO size class in selected EU countries, 2020, €

SO class (€)	EU	Romania	Poland	Italy	Spain	France	Germany
Average SO per farm (€)	38,703	4,029	19,680	57,681	44,124	158,430	167,631
Average SO per farm by SO class (€)							
<2,000	833	707	1,169	1,087	1,048	799	1,454
2,000–3,999	2,854	2,786	2,886	2,905	2,914	2,921	3,082
4,000–7,999	5,669	5,482	5,679	5,815	5,760	5,818	5,921
8,000–14,999	10,926	10,650	10,948	11,024	11,012	11,280	11,139
15,000–24,999	19,252	18,949	19,289	19,306	19,351	19,532	19,378
25,000–49,999	35,187	34,040	35,388	35,180	35,481	36,287	35,584
50,000–99,999	70,239	68,629	68,826	70,092	70,224	72,062	71,882
100,000–249,999	155,403	152,464	145,350	152,246	148,697	162,265	161,134
250,000–499,999	336,987	341,016	320,335	342,017	313,278	340,125	340,118
≥500,000	1,141,919	1,253,978	108,830	1,499,593	1,001,360	856,873	1,087,571

Source: Popescu (2023), based on Eurostat 2022.

In recent years, the number of people employed in the agricultural sector of most EU countries has been **declining**, while employment in the **services sector** has been increasing. Thus, the **structural transformation** of the economy and the **gradual modernization** of agricultural production continue. According to Eurostat data, during **2010–2019**, the number of workers (annual working units, AWU) per **100 hectares of utilised agricultural area (UAA)** ranged from **2 AWU per 100 ha in Sweden** to **17 AWU per 100 ha in Slovenia** (in **Malta**, this figure was **43 AWU per 100 ha**, which is a clear deviation from the "norm" due to the limited land resources of this island country). The indicator of AWU per 100 ha **decreased in almost all countries**, except for the **Netherlands, Austria, Malta, Slovenia, the United Kingdom, and Greece**.

Figure A1. Average number of employed persons in the agricultural sector of EU countries, AWU per 100 Hectares, 2010–2019



Source: Zakrzewska & Nowak (2022)

Appendix B. Methodological Limitations of Statistical Data in Wartime

An objective analysis of the structure and dynamics of Ukraine's agricultural sector under wartime conditions faces **fundamental methodological challenges** that significantly affect the quality and completeness of statistical data. Understanding these limitations is critical for the proper interpretation of the indicators presented in this study and for shaping sound agricultural policy.

Legal basis of statistical limitations

The Law of Ukraine *"On the Protection of the Interests of Entities Submitting Reports and Other Documents During Martial Law or a State of War"* created legal grounds for deferring statistical reporting. Under this law, legal entities were granted the right to submit reports within three months after the end or cancellation of martial law, covering the entire non-reporting period. According to estimates from the State Statistics Service of Ukraine, approximately 20% of respondents exercised this right not to submit reports. This has resulted in a significant gap in primary data, particularly regarding small and medium-sized producers, who have traditionally shown the lowest levels of statistical reporting.

Suspension of field surveys

A critical factor in the deterioration of statistical quality has been the suspension of surveys of household agricultural activities. With the start of the full-scale invasion, all field surveys were halted for safety reasons. Consequently, current estimates of household production are based largely on previous years' data, adjusted for expected trends, and supplemented by administrative information from local authorities.

Such methodology inevitably leads to substantial error, especially under conditions of wartime structural change—population displacement, destruction of infrastructure, and shifts in production patterns.

Impact on structural analysis of producers

These methodological constraints are particularly critical for analyzing the structure of agricultural producers:

- **Underestimation of the role of small producers.** Household farms and small family farms are least represented due to the suspension of field surveys and the option of deferred reporting.
- **Bias toward large enterprises.** Large and medium producers continue to submit regular reports, creating the illusion of their increasing share in overall production.
- **Loss of dynamic tracking.** The inability to record structural transformations in real time prevents timely adjustments in state policy.

The need for an agricultural census

Since 1945, the Food and Agriculture Organization (FAO) has supported member states in conducting national agricultural censuses. The current round covers 2016–2025, following a record number of 132 participating countries in the previous round (2006–2015).

The agricultural census is considered the **primary tool for obtaining accurate information on agricultural structure** and for determining the real potential of the sector. Unfortunately, Ukraine has never conducted such a census, which remains a systemic problem—one that has become particularly acute during the war. Conducting a comprehensive agricultural census after the end of active hostilities should therefore be a priority task to restore analytical capacity and ensure an **evidence-based approach** to managing the agricultural sector.

Preliminary nature of current estimates

Given these methodological limitations, all quantitative estimates and structural characteristics presented in this study should be regarded as **preliminary**. The real structure of the agricultural sector may differ from that presented here, especially concerning small and medium producers.

At the same time, even taking statistical errors into account, the key trends—**production concentration, the decline in the number of small farms, and the dominance of large structures**—remain reliable and are confirmed by multiple independent sources.