Міністерство
аграрної політики та
продовольства України

KSE | Center for Food
and Land Use Research

OVERVIEW OF THE SEEDS SECTOR IN UKRAINE AND THE EU REGULATIONS

This report was prepared by The Center for Food and Land Use Research at the Kyiv School of Economics in cooperation with the Ministry of Agrarian Policy and Food of Ukraine within the framework of a memorandum of cooperation.

The author **Olha Halytsia**
The editor **Mariia Bogonos**

2024

1. UKRAINIAN SEEDS SECTOR

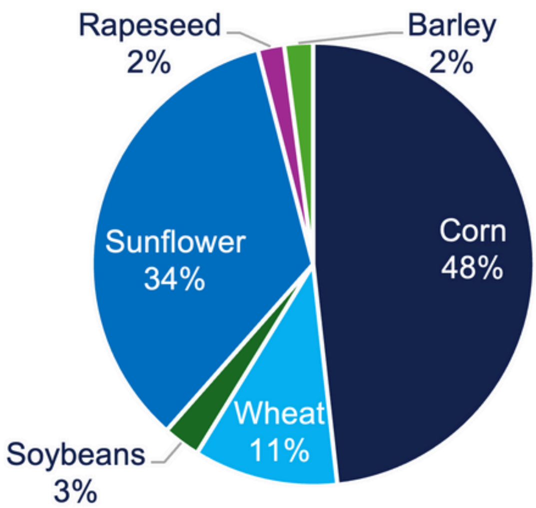
Seed production is central to achieving a more sustainable, productive and diversified agriculture. Ukraine produces a wide variety of seeds with wheat and barley seeds dominating Ukrainian seed fund due to the highest seeding rate: 230-235 kg/ha compared to 25 kg/ha for corn, while corn and sunflower seeds have the largest shares in the production volume (measured in sowing units). Despite the unprovoked Russian full-scale invasion of Ukraine, seed areas for oil crops such as sunflower and soybeans increased in 2023 compared to 2021 while cereal seed areas experienced a noticeable decline (Figure 1).

Figure 1. *Seed areas and production structure in Ukraine*

Seed areas (inspected), '000 ha

	2021	2022	2023
Oilseed			
Sunflower	11.62	8.82	13.33
Soybeans	10.13	12.13	12.70
Rapeseed	0.49	0.23	0.29
Flax (oilseed)	0.11	0.06	0.15
Cereal seed			
Wheat	44.46	32.69	23.39
Corn	47.70	31.81	35.15
Barley	15.82	9.53	6.28
Other	13.15	6.72	8.57

Seed production (sowing units) structure for selected crops [1]



Source: Own calculations based on registers of certificates for varietal quality

Production of seeds is characterized by a relatively low level of concentration: 120 and 250 producers had areas under oilseeds and cereal seeds respectively in 2023 and the share in total inspected seed areas of the top 5 producers was 35% and 27% respectively. There are a number of European companies (Corteva Agriscience, KWS, Bayer) producing seeds at Ukraine-based plants that are targeted specifically for the European market. Thus, the quality of Ukrainian seeds meets the high standards of European buyers.

With respect to seed areas by region, in 2023 Cherkasy, Poltava, Ternopil, Khmelnytskyi, Zhytomyr, Dnipropetrovsk and Odesa regions were the top ones by seed areas of oilseeds, cereal seeds or both (Figure 3). Kherson region, part of which is temporarily occupied, was the sixth largest region by the oilseed area in 2021 (Figure 2).

1 *The total production volume if the sum of seed production volume for selected crops*

Figure 2. *Seed areas in 2021 by region and type of seeds*

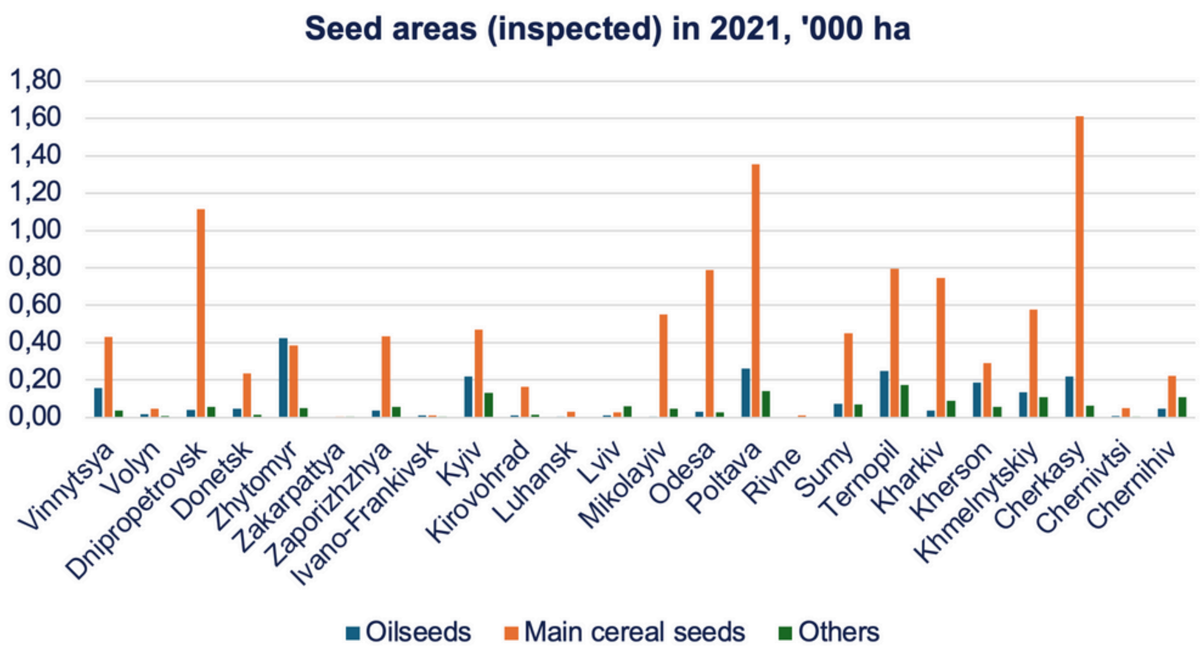
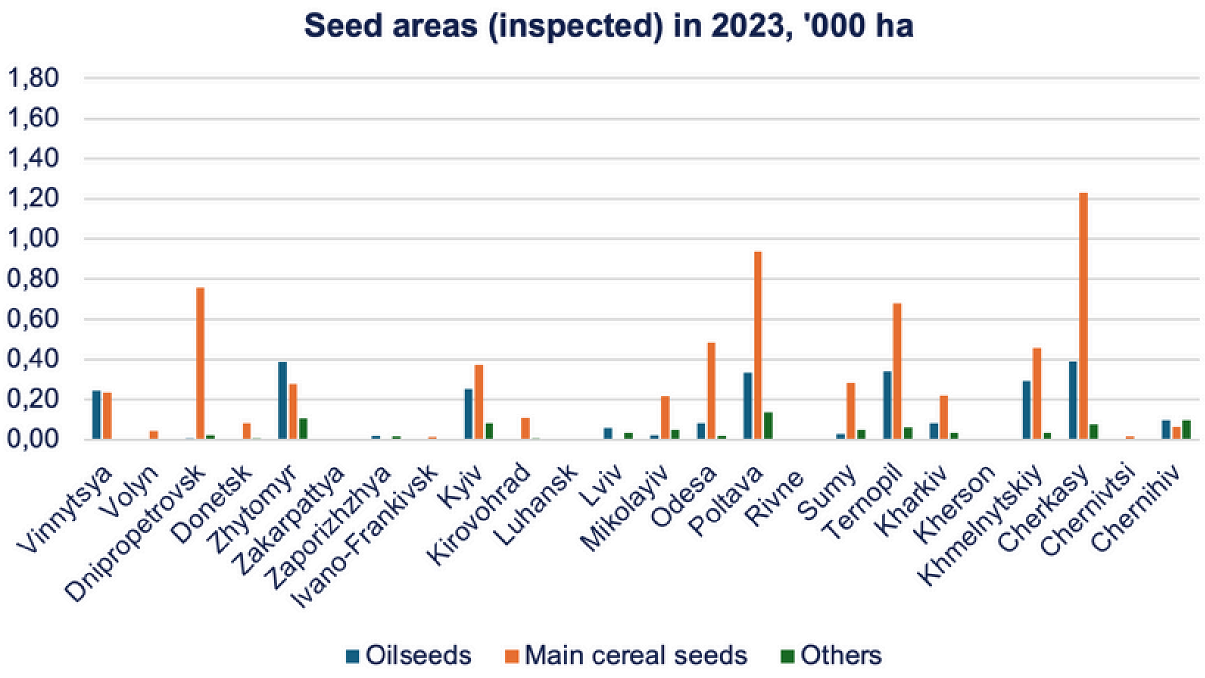


Figure 3. *Seed areas in 2023 by region and type of seeds*



As of 2020, the Ukrainian seed sector relied noticeably on seed imports mainly for sunflower (import share is 69%), rapeseed (51%) and corn (30%) seeds. At the same time, the sector has a number of strengths and provided that current areas for improvement are addressed, development of the local production can be accelerated given existing opportunities (Table 1).

Cost-effective production with a lower average level of wages for skilled labour, proximity to the European market and high quality of produced seeds are among the main strengths of the Ukrainian seed sector. At the same time, given the importance of intellectual property protection for plant varieties and seeds for fostering plant breeding innovation, insufficient level of it (Ukraine's Intellectual Property Rights Subindex in 2024 is 4.544 out of 10)[2] is among the key challenges for the Ukrainian seed sector. Another area for improvement is extending the irrigation network: 2.5 million hectares is the area requiring irrigation in average years under the current climate while 0.4 million hectares is the extent of irrigated area in Ukraine (2017-2021).[3]

With respect to the main opportunities, they are the profitability of seed production and the European market as an important destination for the export of Ukrainian cereal seeds.[4] Gaining equivalence of seeds for oil crops, sugar beets and soybeans[5] is expected to facilitate the export of these seeds to the EU.

Table 1. *Strengths, areas for improvement and opportunities for the Ukrainian seed sector*

Competitive advantages	Areas for improvement	Opportunities
- Proximity to the European market; - Cost-effective production with skilled labour at lower wages and quicker government approvals; - High quality of Ukrainian seeds, many of which are produced by European companies at Ukraine-based plants.	- Insufficient protection of intellectual property; - Need to build irrigation systems.	- Profitability of seeds production (EBITDA margin 10-15% for production of rapeseed, sunflower and corn seeds); - Potential for rapid development of seeds for oil crops, sugar beets and soybeans export to the EU after gaining equivalence of these seeds

2. EU REGULATORY FRAMEWORK FOR THE SEED MARKET

European Union has a comprehensive regulatory framework aimed at ensuring the identity, health and quality of seeds and propagating material that comes from inside or outside the EU. It has three main pillars: registration of seed varieties, their certification (providing they meet 5 core criteria) and marketing rules (Figure 5). The marketing of seeds and other types of plant reproductive material (PRM) in the EU is governed by a number of Directives (Figure 6), the main goal of which is to guarantee seed quality and identity and thus facilitate the growth of agricultural production and productivity, by relying on uniform and stable varieties.[6]

2 *International property rights index in 2024*
3 *Advancing Irrigation and Climate Adaptation in Ukraine*
4 *In 2020 the resolution was passed confirming the equivalence of Ukrainian oat, barley, rice, rye, wheat, triticale, corn, and sorghum seeds with EU requirements.*
5 *The decision of the European Parliament and of the Council amending Council Decision 2003/17/EC as regards the equivalence of field inspections carried out in Ukraine*
6 *EU reform of seeds marketing rules: Which seeds for a just transition to agroecological and sustainable food systems?*

Figure 5. *Three pillars of the EU seed marketing legislation*

1

Registration of seed varieties in the official catalogue
- Following the DUS procedure (Distinction, Uniformity, Stability)
- Additional “Value for Cultivation and Use” tests for field crops

2

Certification of seed lots: Rules
- Criteria to be met:
- Varietal identity
- Varietal purity
- Specific/analytical purity
- Germination rate
- Sanitary requirements

3

Rules for seed marketing
- Labelling rules
- Packaging rules

Source: EU Seed Marketing Legislation

Figure 6. *EU Seed Marketing Directives*

Directive 2002/53/EC on the common catalogue of varieties of agricultural plant species	Directive 66/401/EEC — fodder plant seed
	Directive 66/402/EEC — cereal seed
	Directive 2002/57/EC — seed of oil and fibre plants
	Directive 2002/56/EC — seed potatoes
	Directive 2002/54/EC — beet seed
Plant propagating material	Directive 2008/90/EEC — fruit propagating material and fruit plants for fruit production
	Directive 2002/55/EC — vegetable seed
	Directive 2008/72/EC —vegetable propagating and planting material, other than seed
	Directive 68/193/EEC — material for the vegetative propagation of the vine

Source: EU marketing requirements

Currently, the EU Commission is working on revising the plant (and forest) reproductive material legislation to ensure its alignment with the objectives of the European Green Deal and its 'farm to fork', biodiversity, climate adaptation, European digital and new EU forest strategies.[7] The list of revision outcomes to be achieved is outlined in Figure 7.

7 *Production and marketing of plant reproductive material in "A European Green Deal"*

Figure 7. *Marketing of plant reproductive material (PRM) In "A European Green Deal"*

Revision of the legislation seeks to

- replace multiple marketing directives with a single regulation
- increase clarity and coherence of the legal framework
- support the conservation and sustainable use of plant genetic resources
- harmonise the framework for official controls on PRM
- improve coherence of the PRM legislation with the plant health legislation
- enable the uptake of new scientific and technical developments and in particular, innovative production processes, bio-molecular techniques and digital solutions

Source: Production and marketing of plant reproductive material in "A European Green Deal"

Box 1. *Recent changes in the Ukrainian regulatory framework for the seed industry*

The two main laws establish the legal, organizational, and economic basis for the production, certification, and marketing of seeds and planting material, as well as the protection of plant breeders' rights: the Law of Ukraine On Seeds and Planting Material and the Law of Ukraine On protection of rights to plant varieties.

Among the recent developments in the Ukrainian regulatory framework for the seed industry:

- definitions "breeder", "maintainer", etc. were updated, the term 'fake seeds' was introduced for the first time;
- infringement liability was significantly increased;
- the possibility to market non-registered varieties was introduced;
- significantly reduced requirement for parent components in DUS (distinctiveness, uniformity and stability) testing of hybrids;
- the registration of parent components on the National List made non-compulsory;
- the acceptance of varieties listed in the European Union onto the Ukrainian National List without field trials;
- a streamlined procedure for importing seed samples (for research and breeding purposes) was introduced.

Source: How are Varieties Protected in Ukraine?; Ukraine Simplifies Import Procedures for Seed Samples