



# Agricultural Outlook Ukraine 2024-2033



**KSE** | Центр досліджень продовольства  
та землекористування

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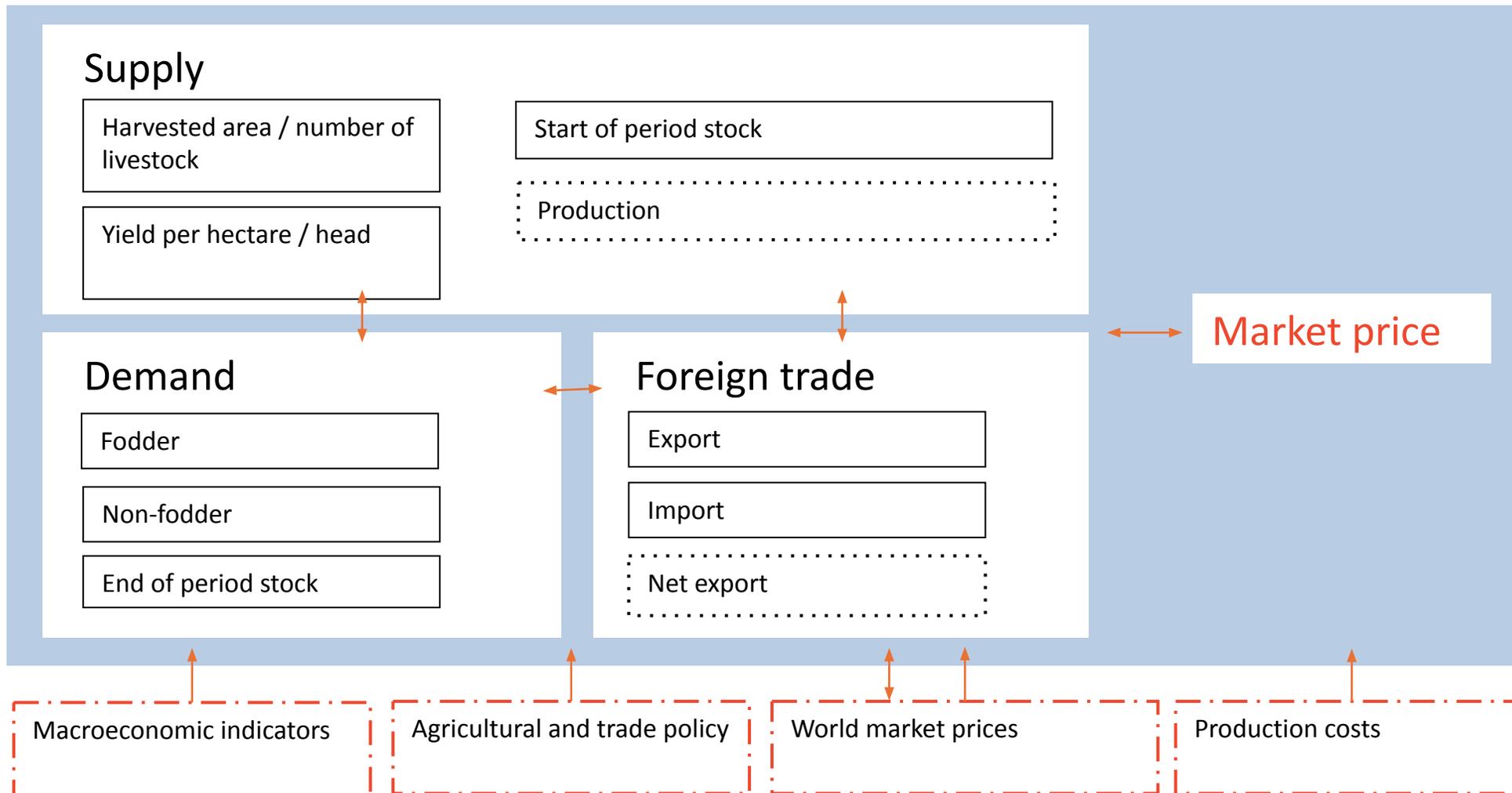


# **1 Methodology and data**

# Methodology

- Partial equilibrium model of agricultural sectors of EU, Ukraine, and other selected countries
- Ukrainian model: Outlook Ukraine consortium:
  - KSE Agrocenter (KSEA)
  - Polissia National University (PNU)
  - National University of Life and Environmental Sciences of Ukraine (NULES)

# Methodology



*Equations are estimated econometrically (OLS and 2-SLS) using panel and time-series data*

# Data

- State Statistics Service of Ukraine (SSSU)
- Own survey of producers for production costs changes in 2022-2023
- ITC Trade Map
- FAOSTAT
- OECD-FAO Outlook 2023 projections
- Ministry for Development of Economy and Trade of Ukraine, Mid-term Outlook 2023 (MDETU)
- Analytical reports by Ukrainian research institutions
- 2022-2024 UAA calculation based on: joint research by World Bank, Ukrainian government, EU Commission, UN, etc.

# Own survey

In Nov-Dec 2023 KSEA conducted a survey of agricultural producers regarding their crop production costs.

The total number of respondents was 197, among them producing the following crops:

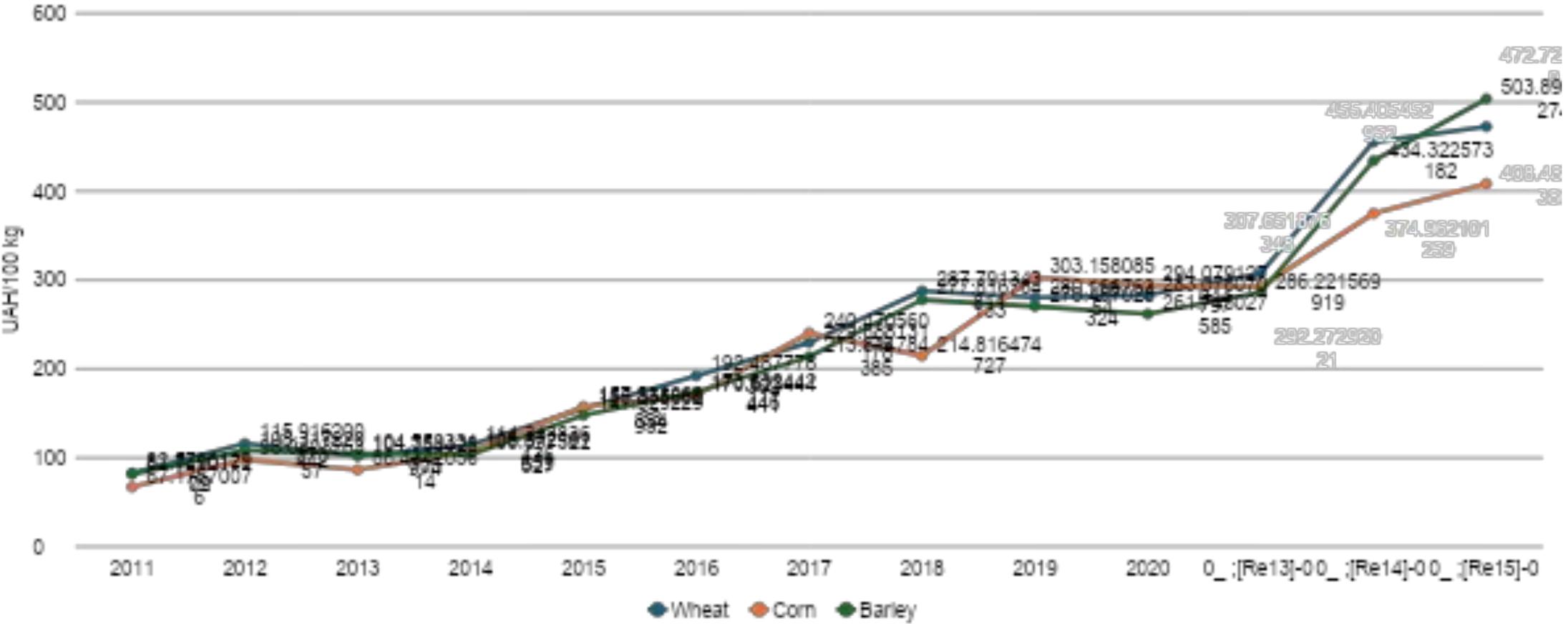
- Wheat (winter) – 130
- Corn – 97
- Barley (winter) – 59
- Rye – 5
- Oats – 5
- Soybeans – 77
- Rapeseed – 27
- Sunflower – 116

# Per-unit production costs: summary

- In 2022 the increase in per-unit production costs is observed for all of the agricultural commodities produced in Ukraine, with the only exception being rapeseed.
- Primary cause for the per-unit costs increase is the high price inflation rate in 2023 and additional production inputs price increase caused by the logistics and supply chains disruption.
- Along with the drop in farm-gate prices, it caused farmers' gross margin to shrink substantially.
- As situation in Ukraine stabilized in 2023, the 2022-2023 growth of per-unit production costs have slowed down, due to decreased inflation rate and market adaptation to the new conditions.

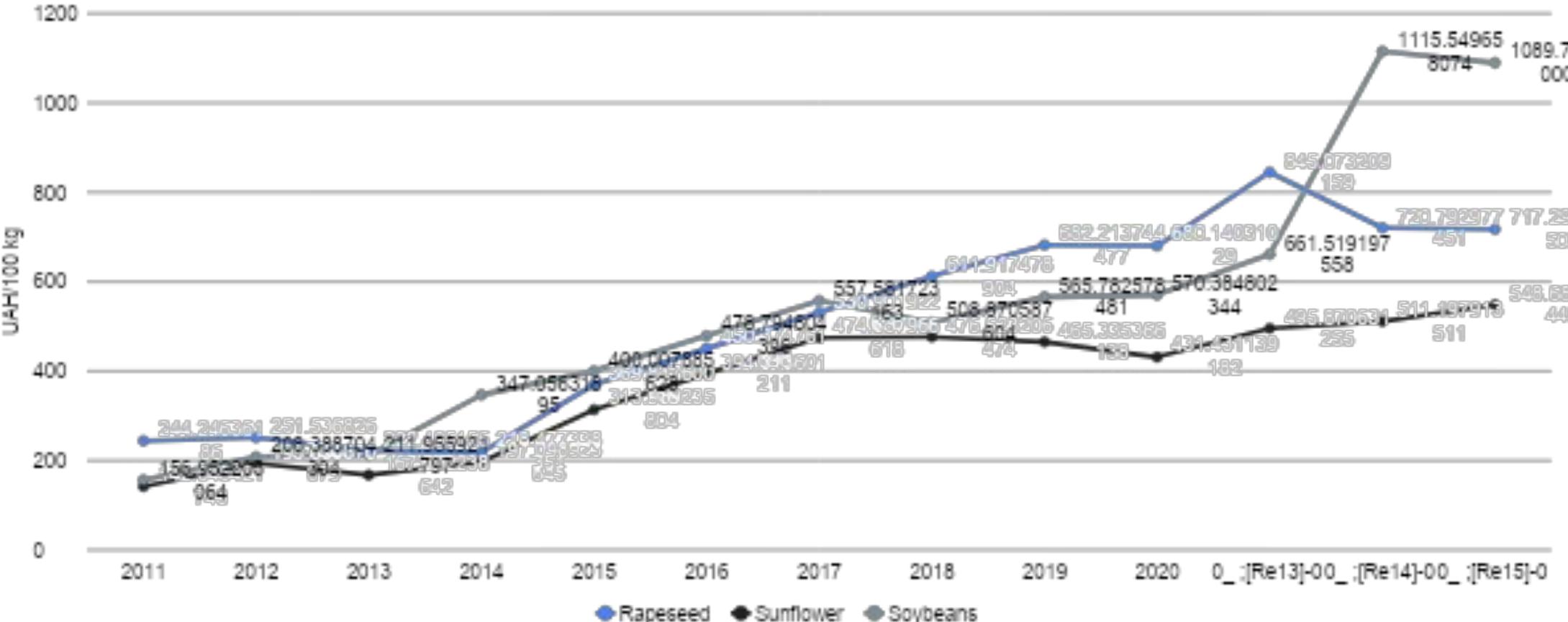
# Per-unit production costs: grains

Source: SSSU for 2011-2021, own producers survey for 2022-2023.



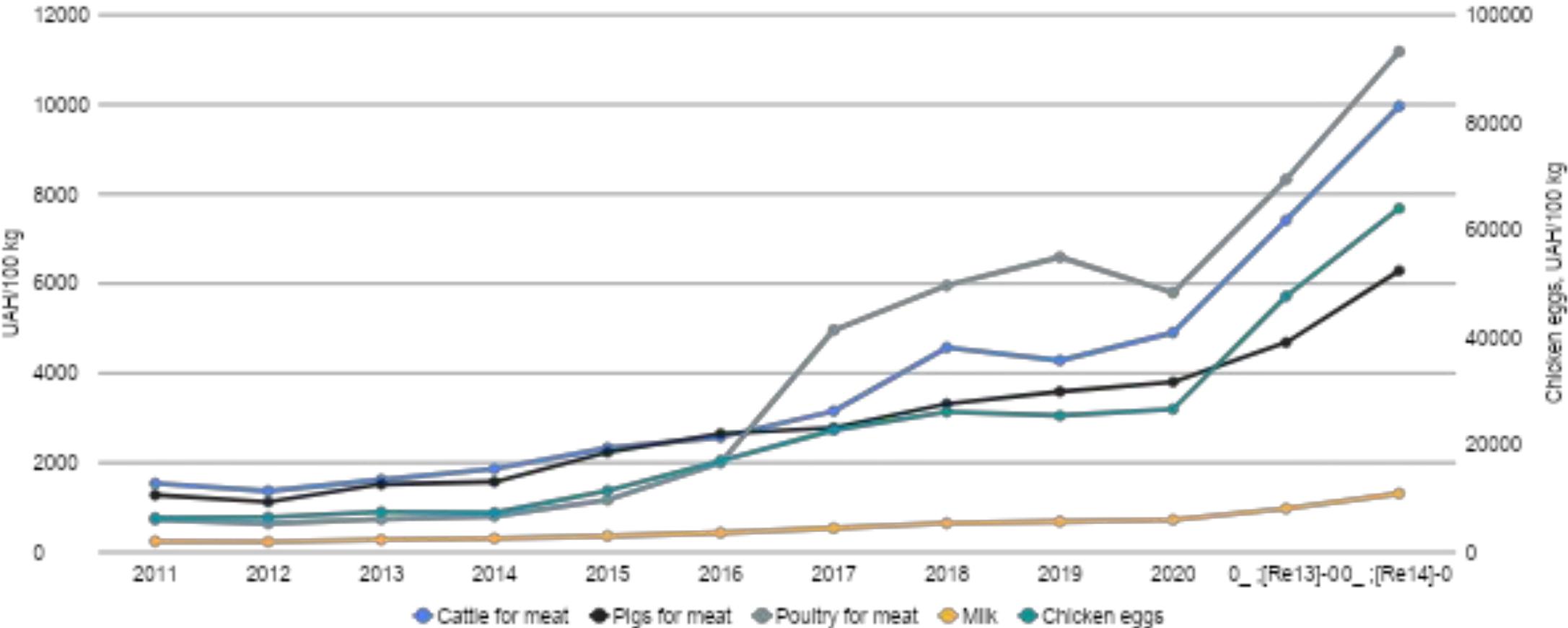
# Per-unit production costs: oilseeds

Source: SSSU for 2011-2021, own producers survey for 2022-2023.



# Per-unit production costs: livestock

Source: SSSU for 2011-2022

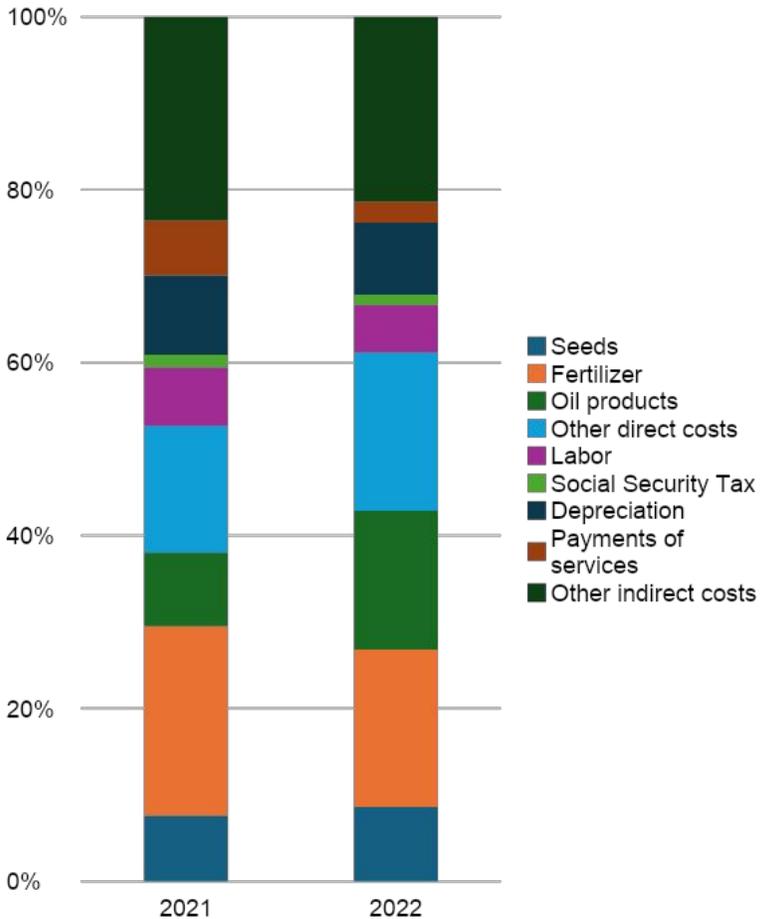


# Production costs structure: summary

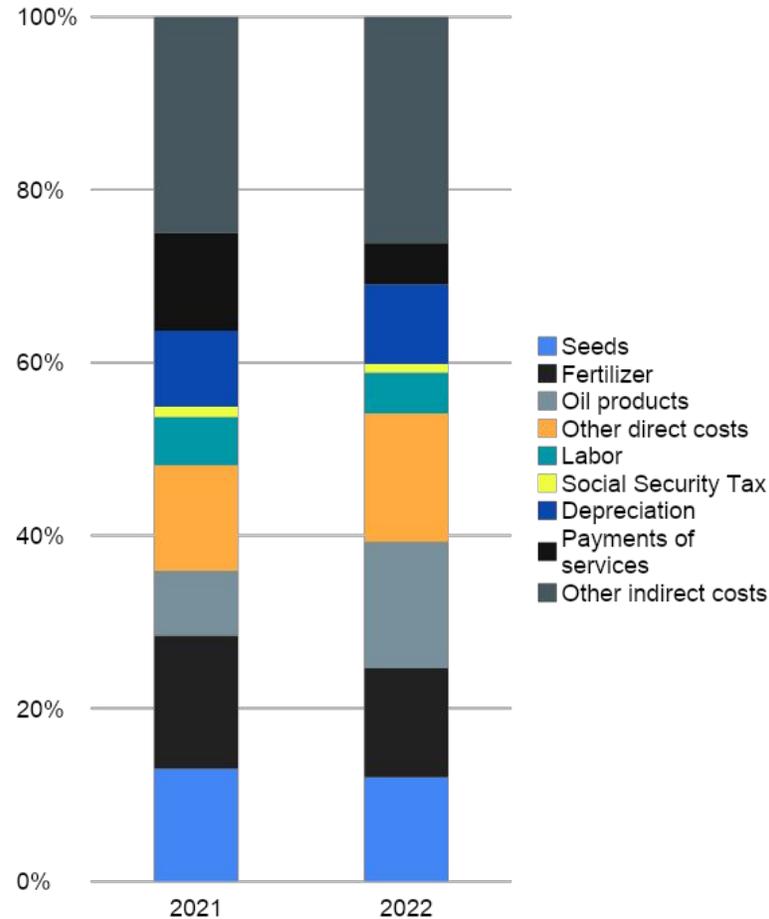
- Main change observed – increase of the fuel share in the production costs structure.
- The second expenditures category that is increasing for all crops are the *other indirect costs*, which includes logistics, handling, product losses, storage, machinery and equipment maintenance, etc.
- Fertilizer share remains unchanged for most crops, and decreases for sunflower, rapeseed and oats.

# Costs structure: grains

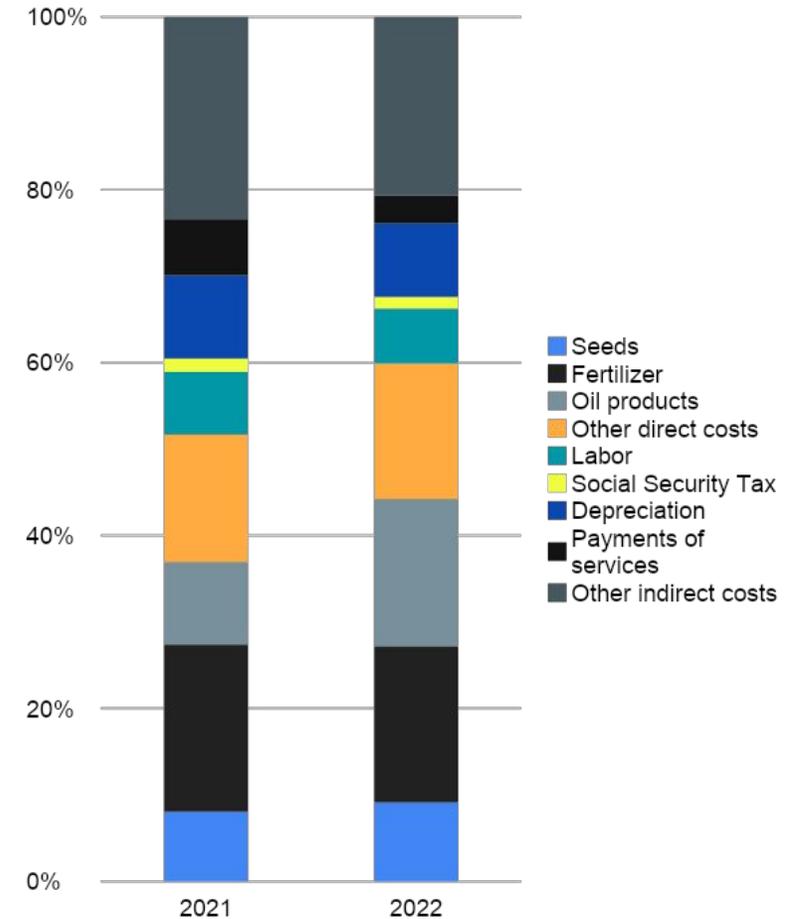
Wheat



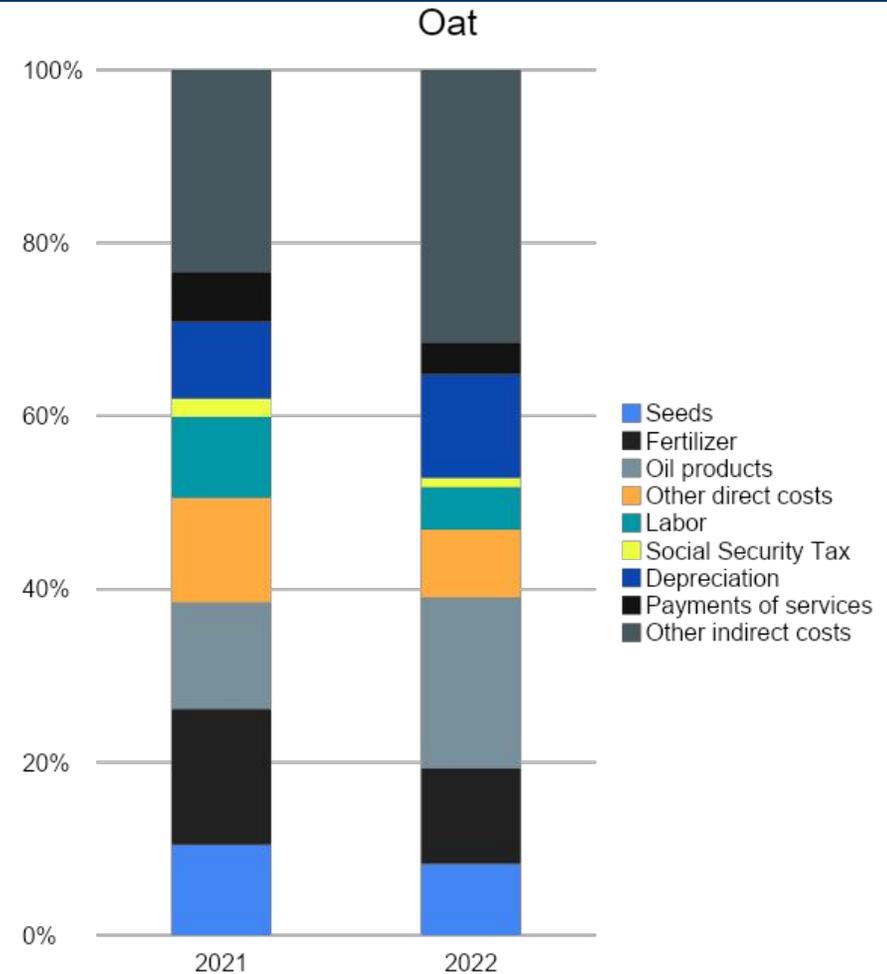
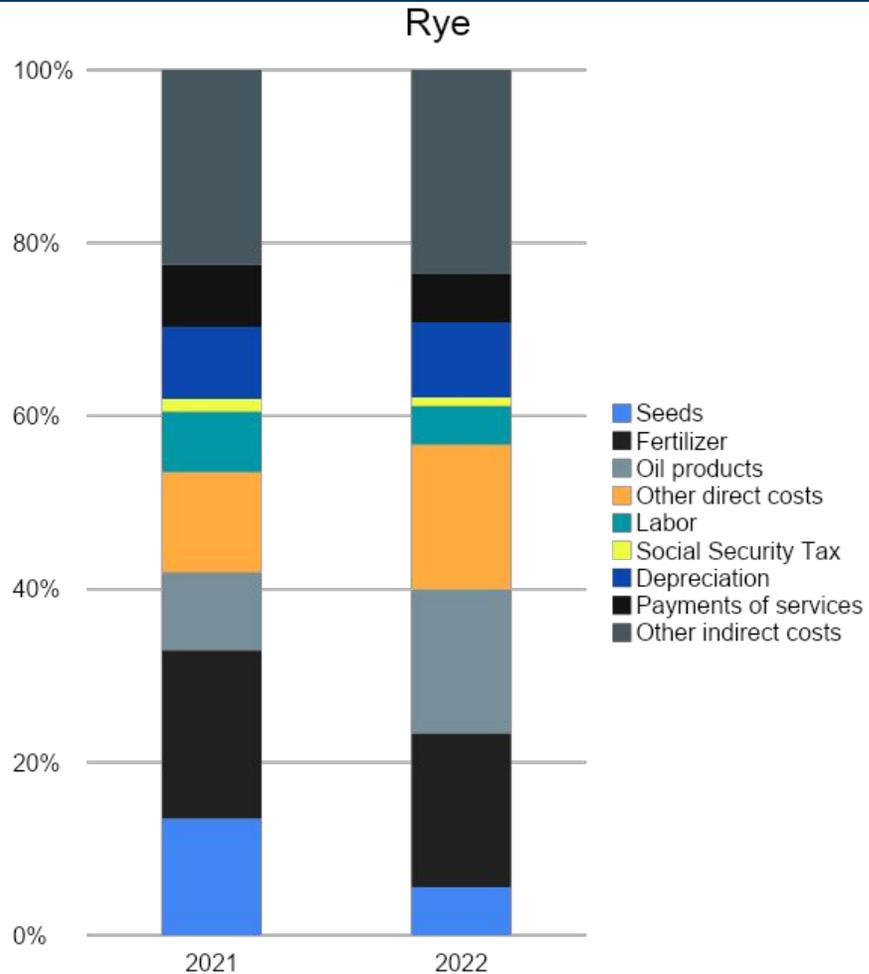
Corn



Barley



# Costs structure: grains

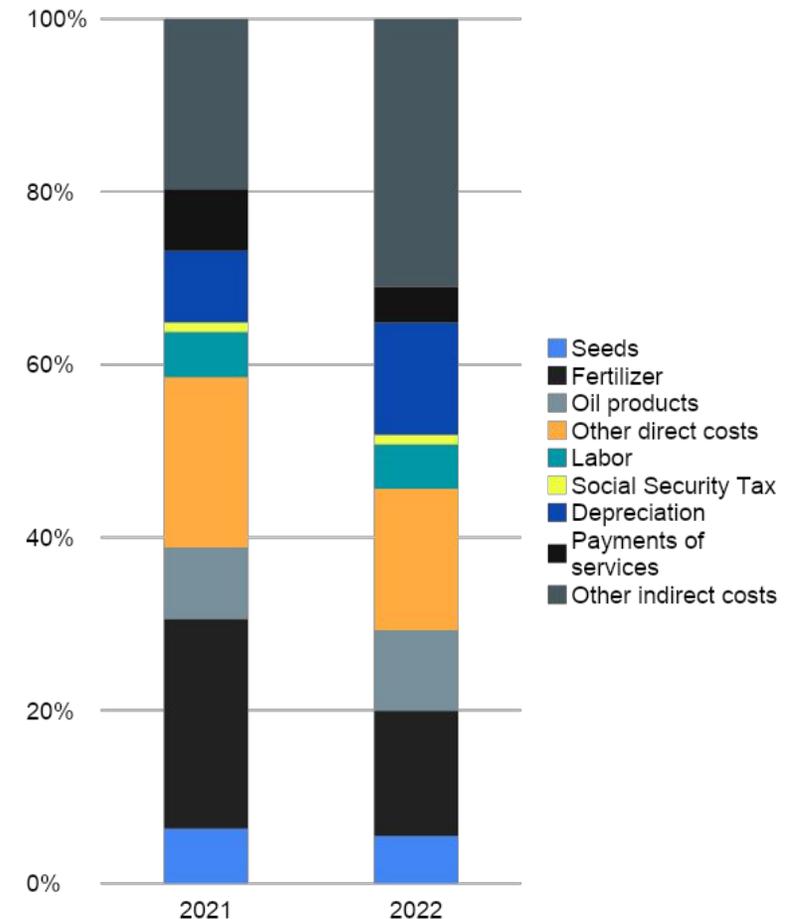
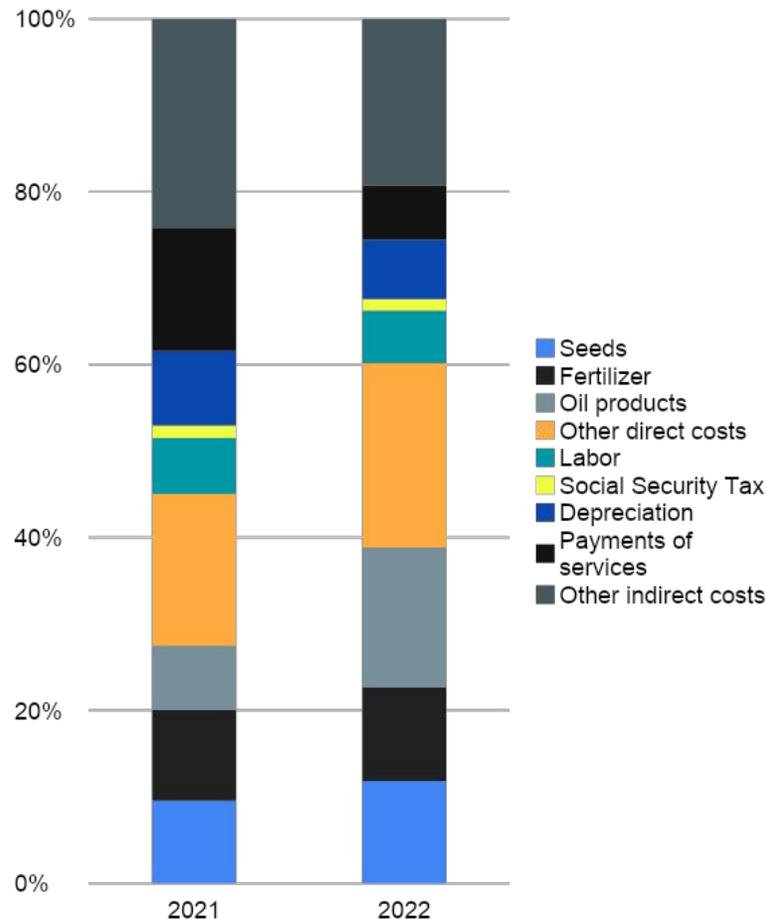
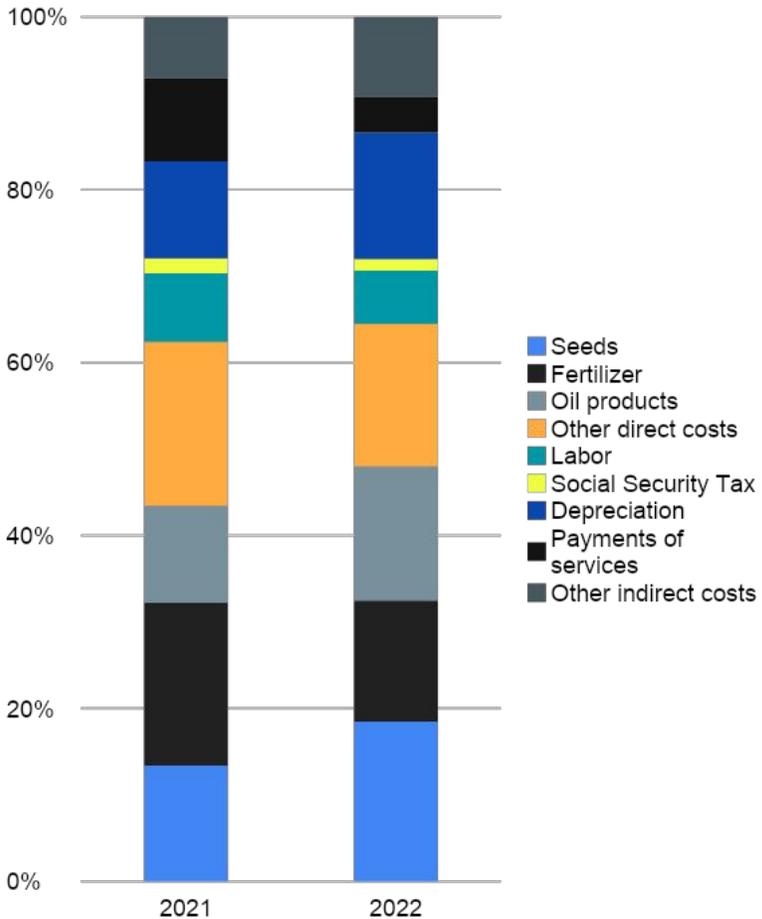


# Costs structure: oilseeds

Sunflower

Soybeans

Rapeseed





# **2** **Macroeconomic assumptions**

# Market power

Identifying markets where Ukraine impacts the world prices

## Methodology

RDE - Residual demand elasticity

## Data sources

Dependent variable: FOB  
Rotterdam, CME, Euronext, ICE  
Independent variables: Comtrade  
UN, FAO, Ukrstat

## Equation

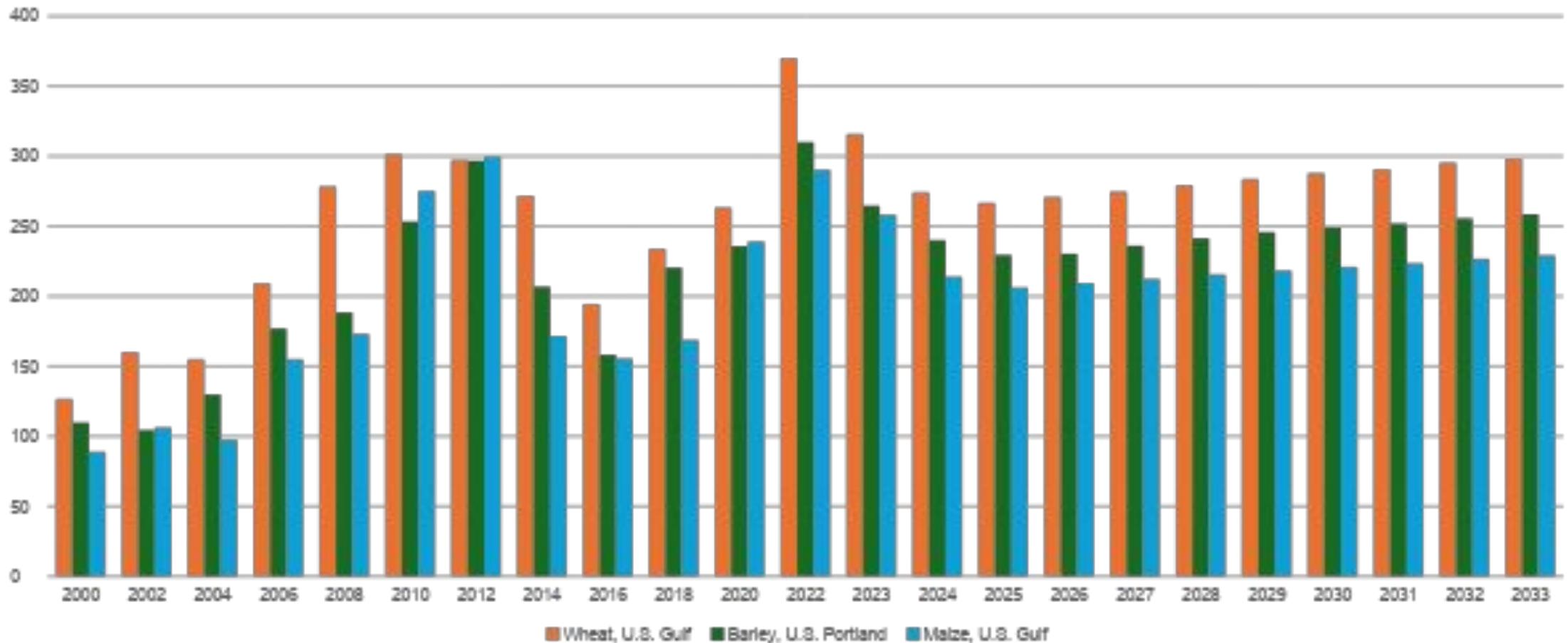
$World\_price = f(\text{export\_Ukraine}, \text{demand\_supply\_shifters}, \text{other\_control\_variables})$

Product	Export share (2010-2022)	Research results (impact on world price)
Wheat	7%	not significant
Sunflower oil	54%	significant
maize	13%	not significant
Barley	12%	not significant

**The current outlook includes endogenous world market price for sunflower oil.**

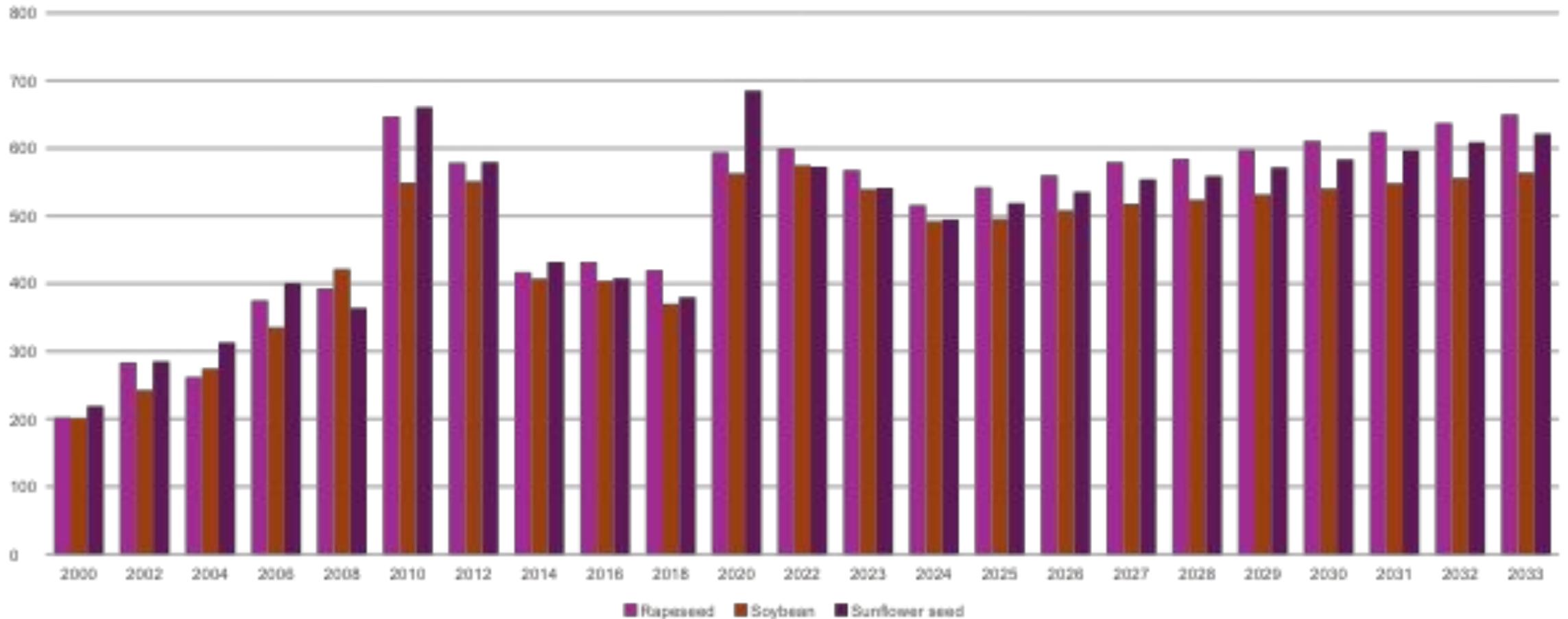
# World market prices

Source: OECD-FAO Outlook 2023



# World market prices

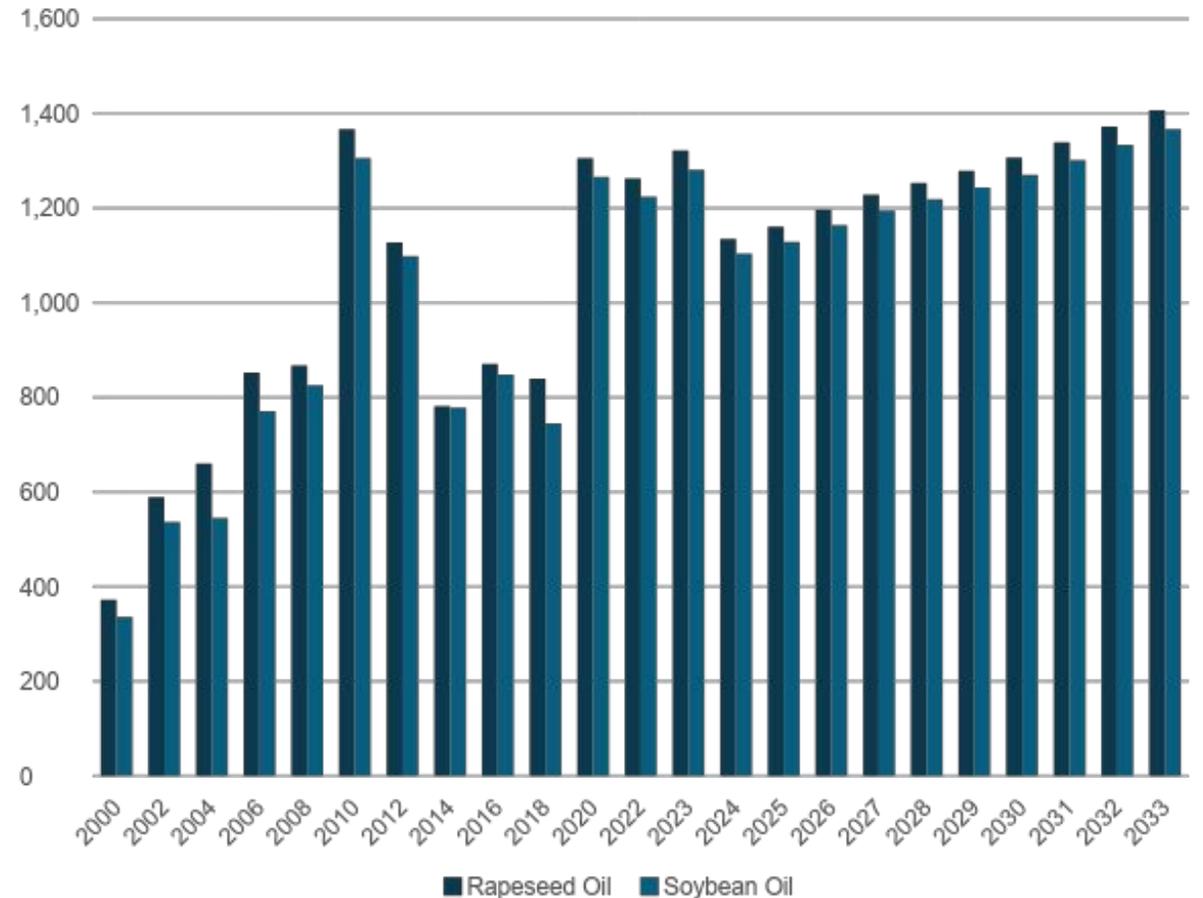
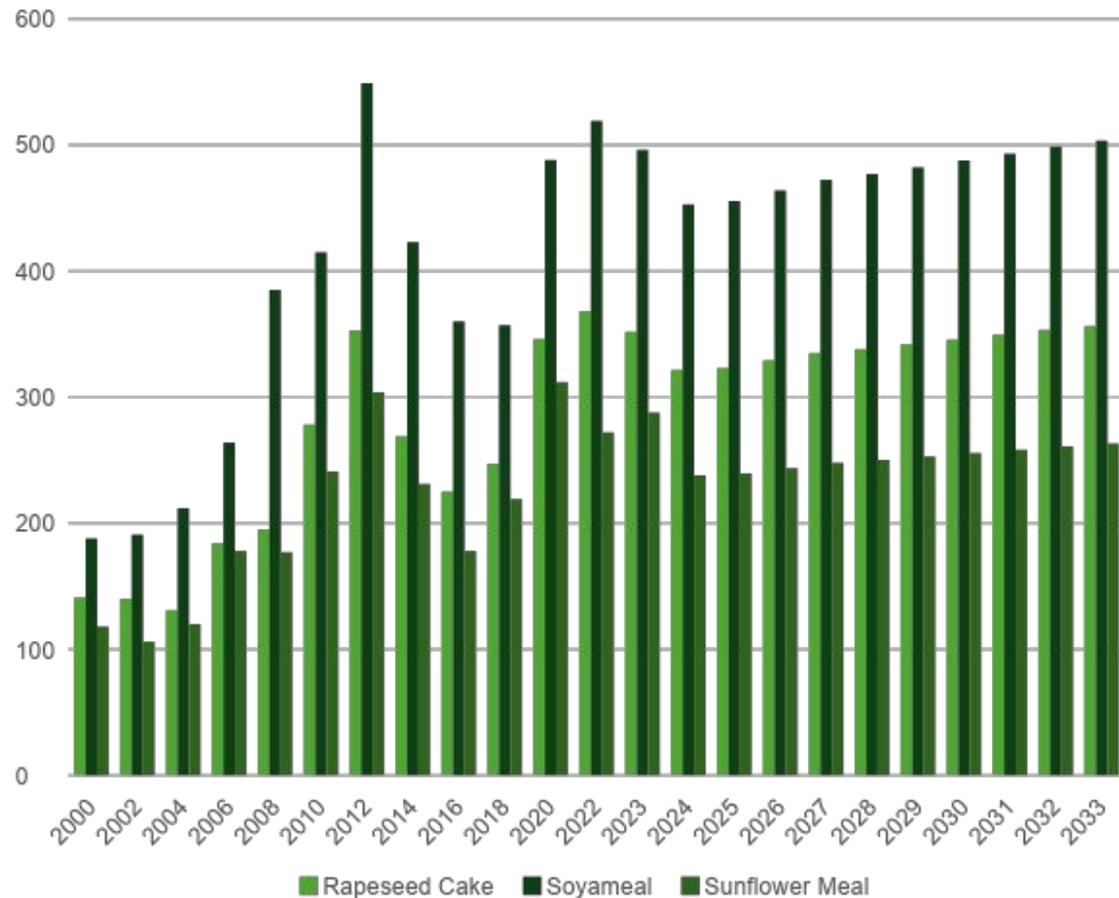
Source: OECD-FAO Outlook 2023



\* ton refers to metric ton

# World market prices

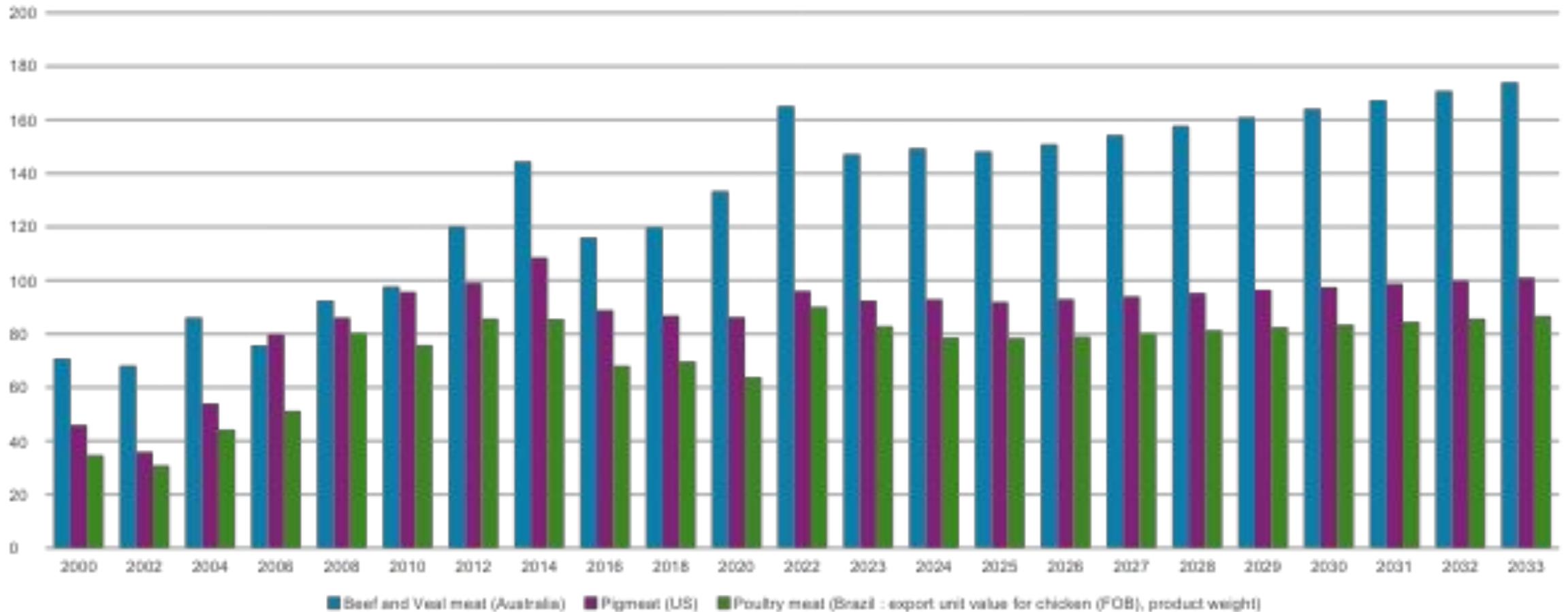
Source: OECD-FAO Outlook 2023



\* ton refers to metric ton

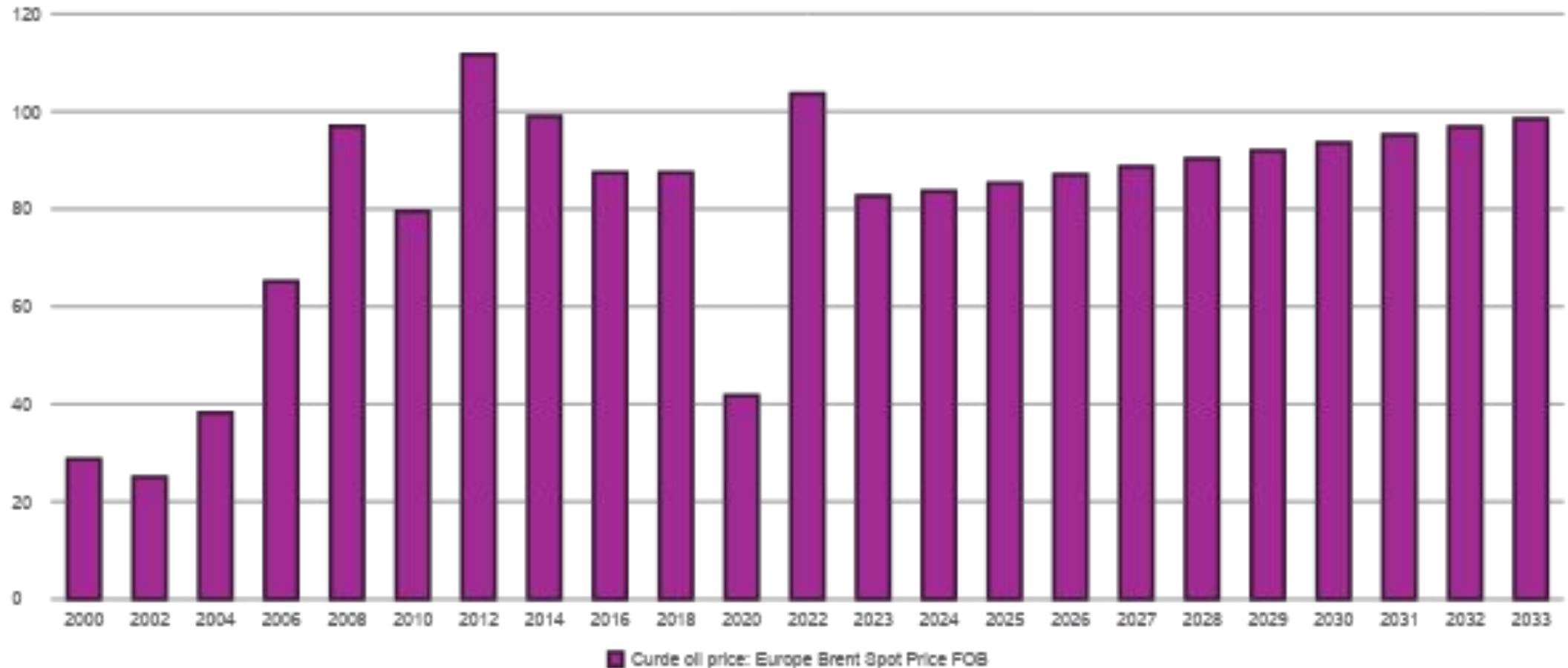
# World market prices

Source: OECD-FAO Outlook 2023

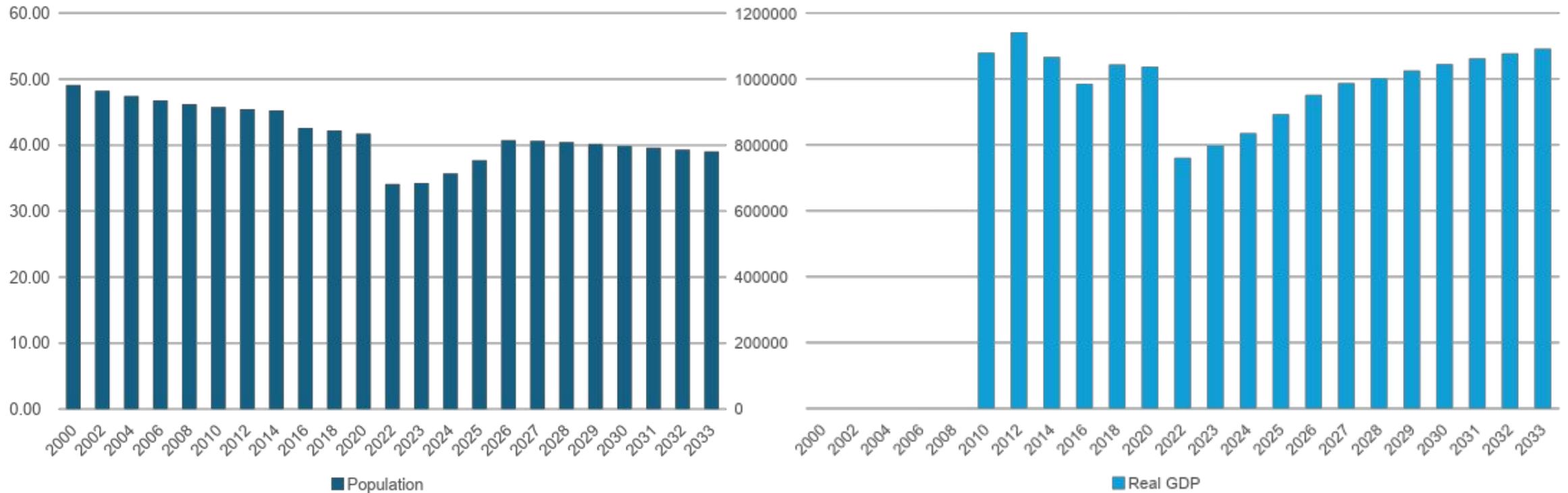


# World market prices

Source: OECD-FAO Outlook 2023



# Macro assumptions



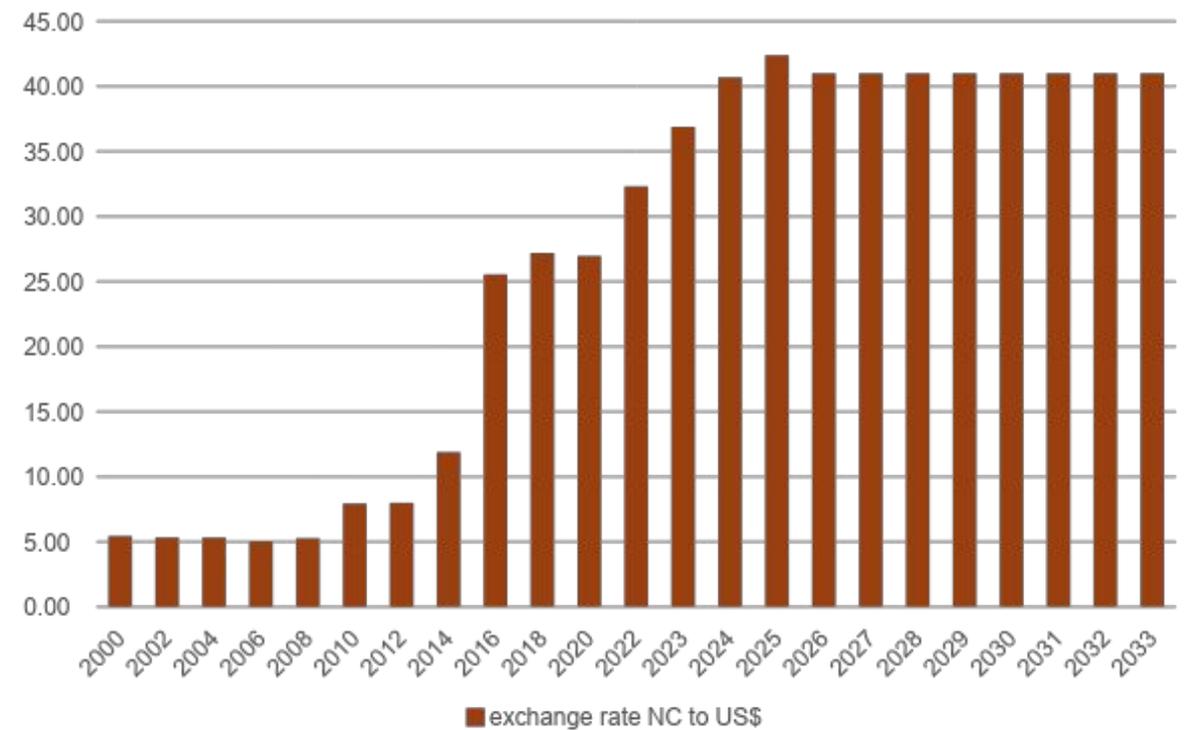
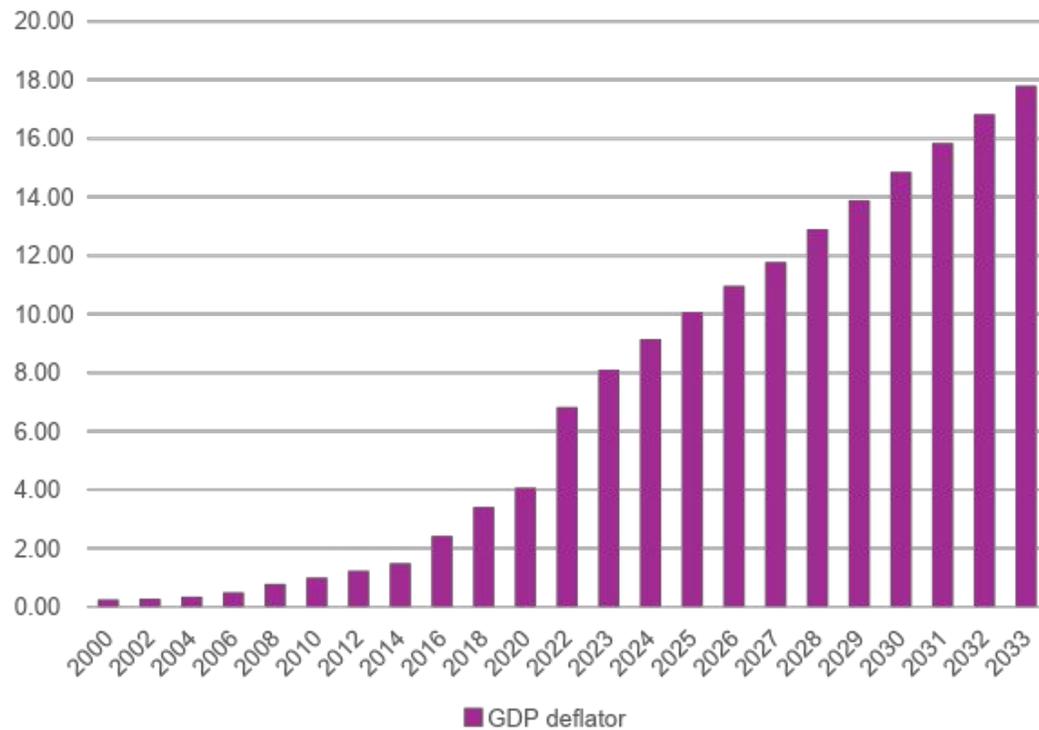
Sources:

2000-2021 SSSU

2027-2033 own extrapolation from the MDTU trends

2022-2026 MDTU

# Macro assumptions



Sources:

2000-2021 SSSU

2027-2033 own extrapolation from the MDTU trends

2022-2026 MDTU

# Macro assumptions

- The war is over in December 2024
- All of the agricultural lands (as of 2021) can be returned to production
- Increased production costs are included in 2023-2024. After the war is over they do not fall – they adjust to the inflation rate – the real values of the costs remain stable
- Technical export capacities are not limited

A soldier in a dark uniform and helmet is seen from behind, walking through a vast field of tall, dry, golden-brown grass. The soldier is carrying a rifle and has the Cyrillic letters 'ДСНС' (DSC) on their back. The field extends to the horizon under a clear sky.

# 3 Agricultural land area change during the war

[https://kse.ua/wp-content/uploads/2024/03/Agroviglyad\\_2\\_ukr.pdf](https://kse.ua/wp-content/uploads/2024/03/Agroviglyad_2_ukr.pdf)

An aerial photograph of a rural landscape. The scene is dominated by large, golden-brown fields, likely harvested crops, which are separated by long, straight lines of trees. To the right, there are vibrant green pastures. The lighting suggests a late afternoon or early morning setting, with long shadows cast across the fields. In the distance, a small cluster of buildings is visible. The overall composition is a patchwork of agricultural land and natural vegetation.

# 4 Outlook: Overview

# Crops

## **Pre full-scale invasion trends**

- Crops area has seen increasing cultivation area over decades, reaching over 26 million hectares in 2021.
- Main crops included in the model are wheat, barley, maize, rye, oats, rapeseed, sunflower seeds, soybeans, and their derivatives (meal and oil)

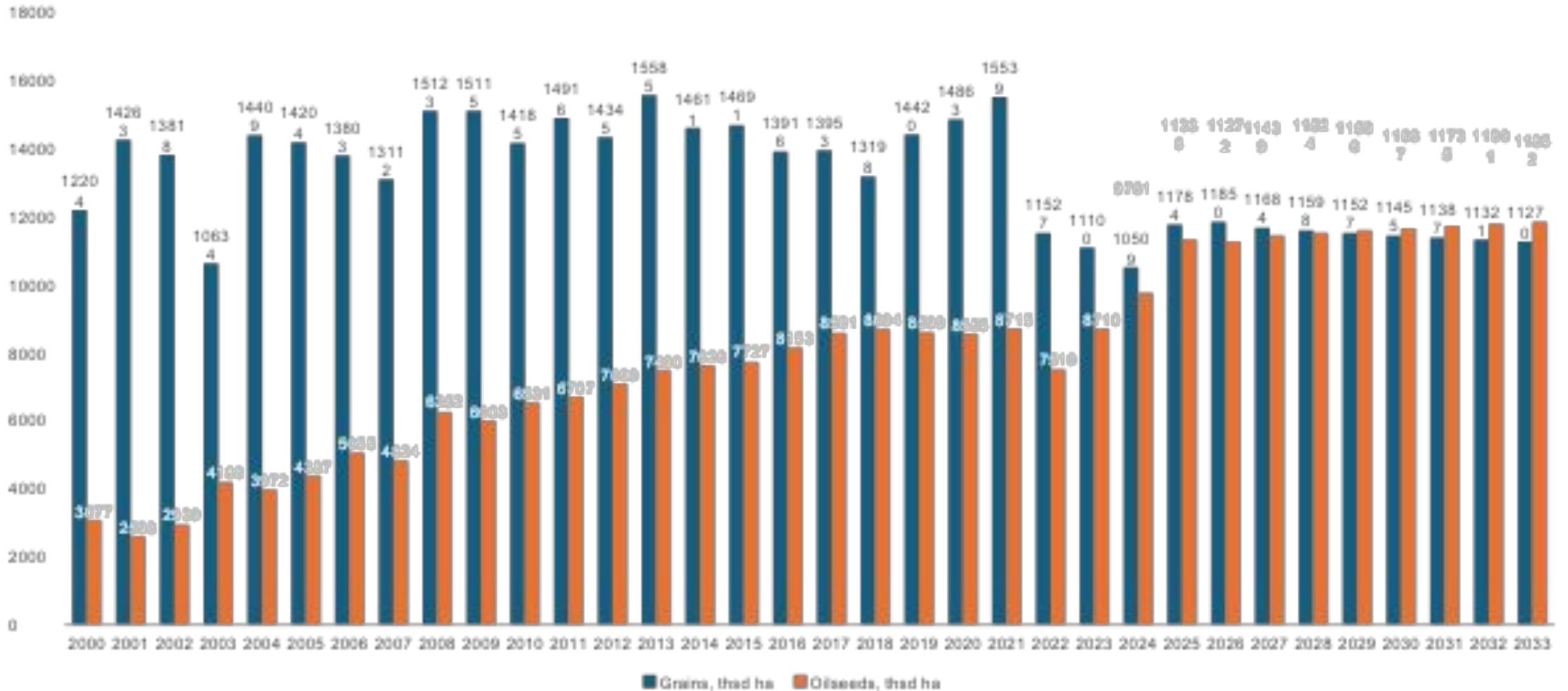
## **War-induced affects**

- Following the full-scale invasion by RF in 2022, crop area decreased by 21%.
- By 2022-2023, around 5.4% of the land devoted to crops was reclaimed and about 15% remains under occupation.
- Access issues to fertilizers and fuel led to reduced yields.
- Production further declined due to attacks and loss of manpower.
- Over two-thirds of grain and oilseed harvests are exported, forming a significant source of income from external trade. The blockade of ports led to a substantial drop in exports.
- Although, the establishment of the Grain Deal and own grain corridor has partially alleviated export challenges, high logistics costs continue to severely impact domestic prices, preventing farmers from fully benefiting from the export corridors.

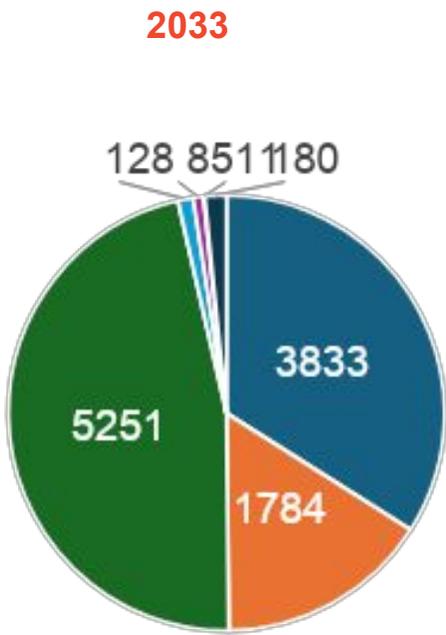
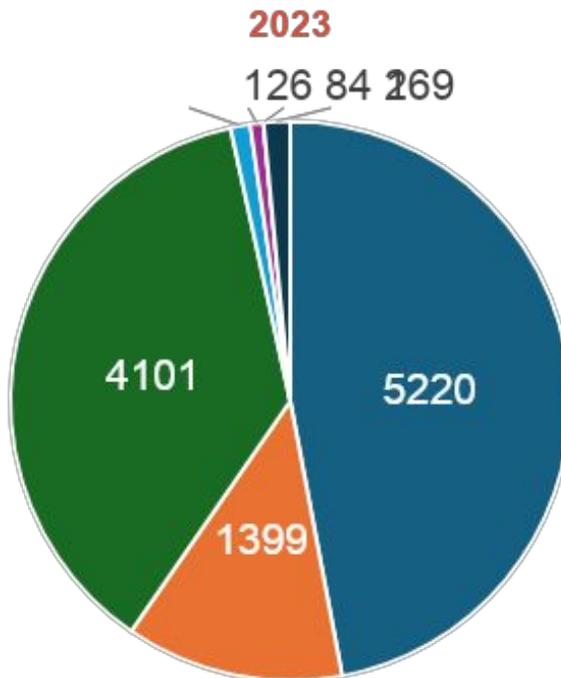
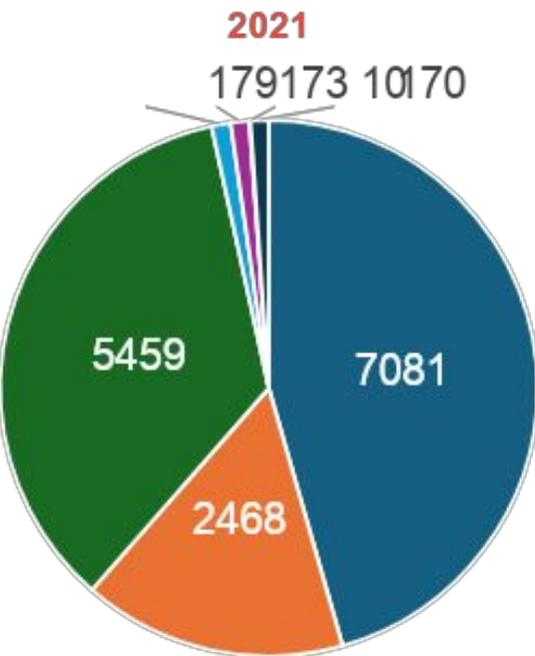
## **Post-war projections**

- By 2025, it's assumed that territories will be reclaimed to 2021 levels.
- Rapid rehabilitation of de-occupied lands for agricultural use is assumed.

# Grains and oilseeds areas



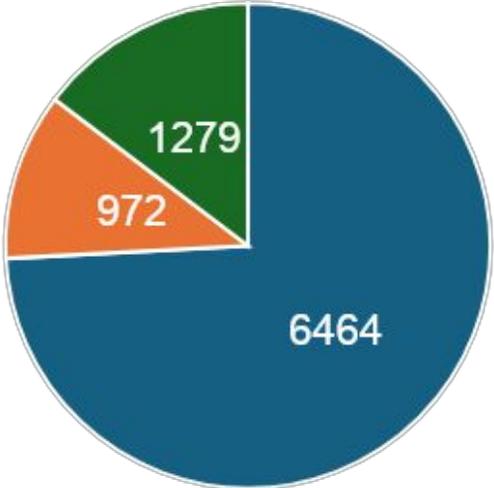
# Grains area distribution



- Wheat soft, area harvested, thsd ha WS\_AHA
- Com, area harvested, thsd ha CO\_AHA
- Rye, area harvested, thsd ha RY\_AHA
- Other grains, area harvested, thsd ha OG\_AHA
- Barley, area harvested, thsd ha BA\_AHA
- Oats, area harvested, thsd ha OA\_AHA
- Rice, area harvested, thsd ha RE\_AHA

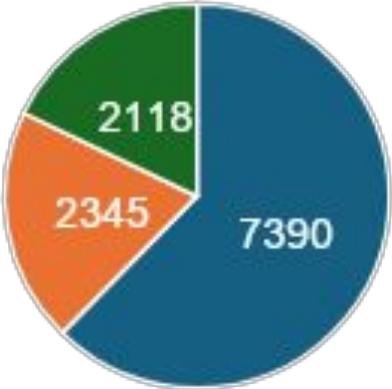
# Oilseeds area distribution

2021

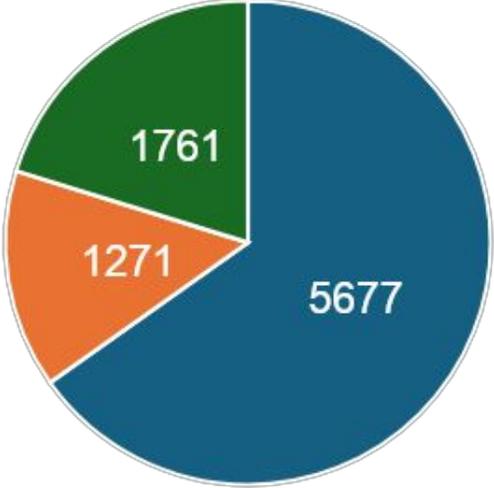


■ 1    ■ 2    ■ 3

2033



2023



An aerial photograph of a combine harvester working in a vast, golden grain field. The harvester is positioned in the center-right of the frame, moving from the top towards the bottom. The field is divided into neat, parallel rows of crops, with the harvester's path creating a distinct line of harvested grain. The overall scene is bathed in warm, golden light, suggesting late afternoon or early morning. The harvester is a complex piece of machinery with a yellow hopper and a green body. The text "5 Outlook: Grains" is overlaid in white, bold font on the left side of the image.

# 5 Outlook: Grains

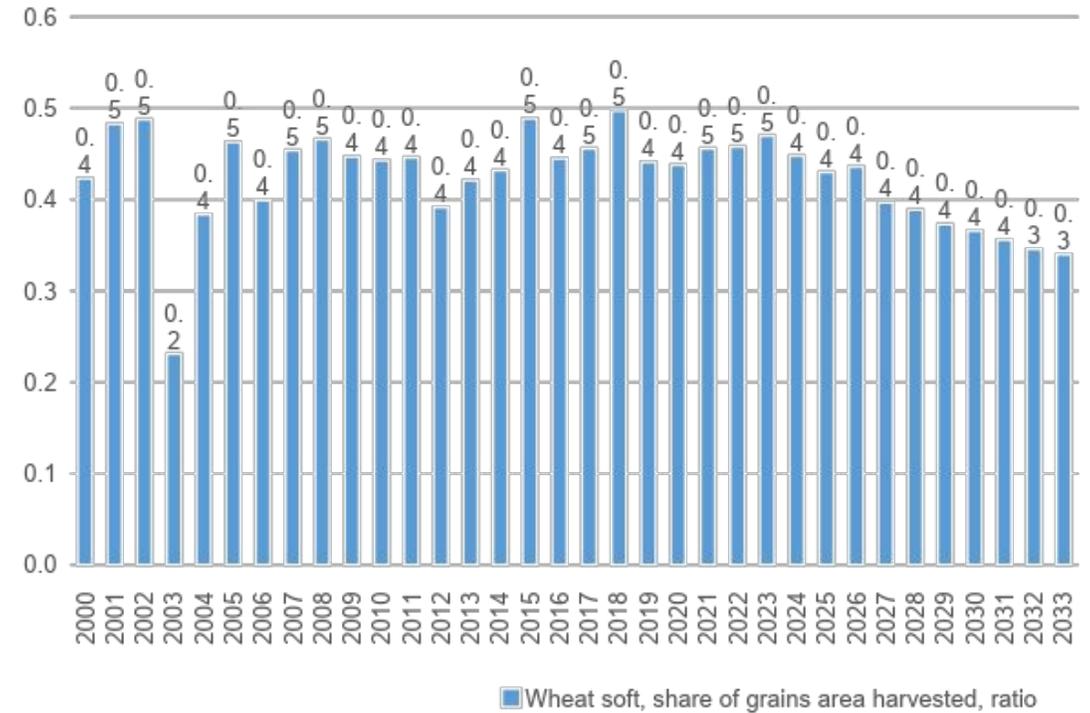
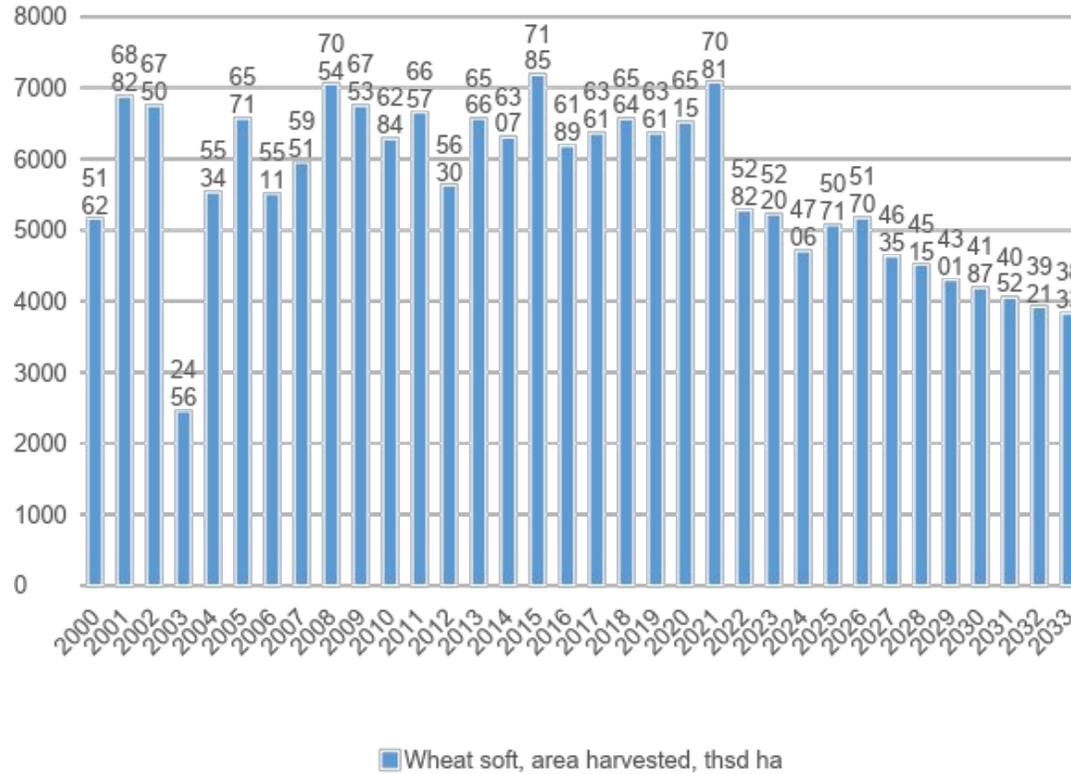
# Grains: summary

- The total **area** for grains (wheat, maize, barley, rye, oats) decreased by 26% in 2022 due to the war from 15.5 mln ha to 11.5 mln ha.
- The combined **production** of the three main crops (wheat, maize, barley), which represent over 95% of the grain area, fell by 37% between 2021 and 2023.
- After the war, grain **areas** are expected to increase by 12% following the reclamation of territories. However, post-2025, a downward trend is expected as grains lose ground to oilseeds due to lower marginal returns.
- **Yields** are projected to return to their 2021 levels in the initial years following the end of the war as technological processes are restored and conditions for agricultural operations normalize.
- **Export** volumes are expected to align with production trends, while **imports** of the main grains will remain low.
- Domestic **prices** for grains and oilseeds are projected to realign with global market rates post-war, though with a wider gap than seen in 2021. The reduction in the price basis will be driven mainly by slower recovery of the logistical efficiency.

# Soft wheat

- In 2022, the wheat area decreased by 24% due to aggression by the RF.
- The trend of decreasing wheat area is expected to persist, influenced by a shift towards more profitable oilseeds and maize, which offer higher marginal returns.
- Although yield improvements are anticipated, they will not entirely offset the reduction in area, leading to a continued but less pronounced drop in wheat production.
- By 2033, production is forecasted to reach only 19 million tonnes.
- Wheat exports are expected to increase after the war. However, the exports are anticipated to decrease over time, in line with the overall decline in production.
- Domestic wheat consumption, which represents about 30% of total production, is predicted to fall. This decline is driven by downward trend in per capita consumption for food and lower demand for livestock feed, reflecting the negative trend in the cattle sector.

# Soft wheat

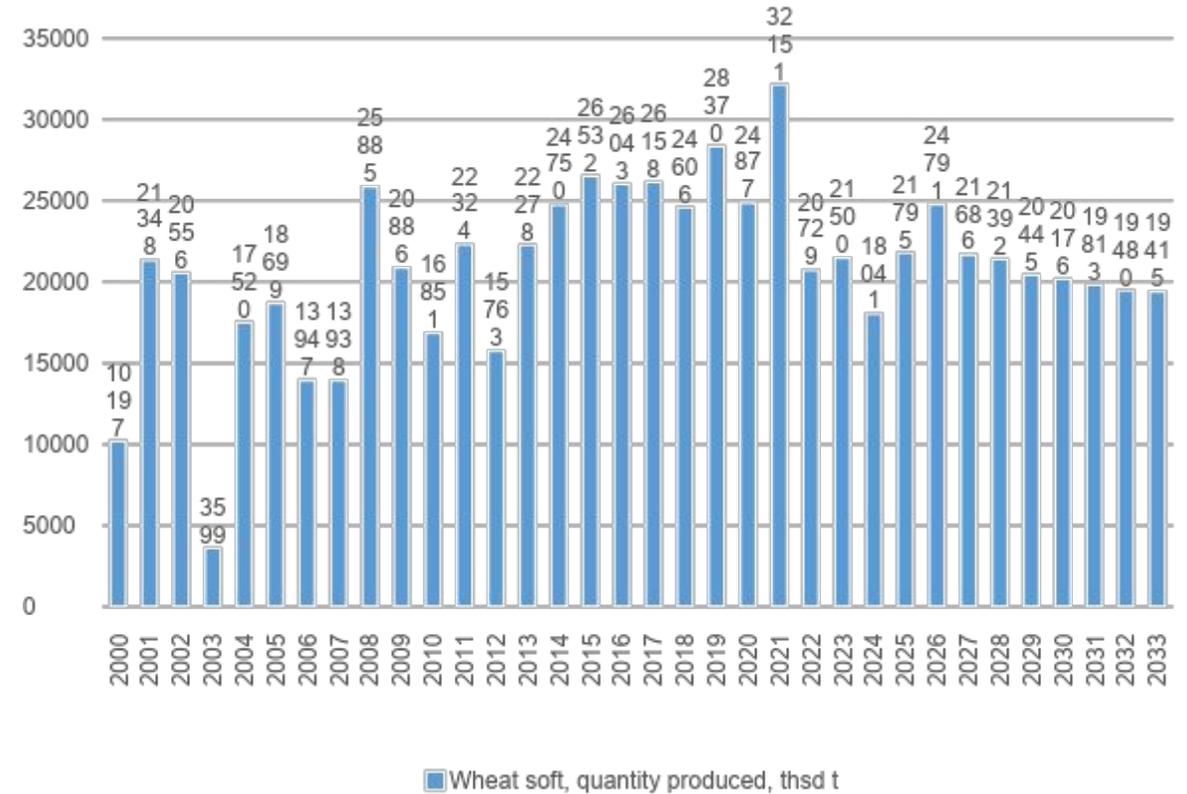
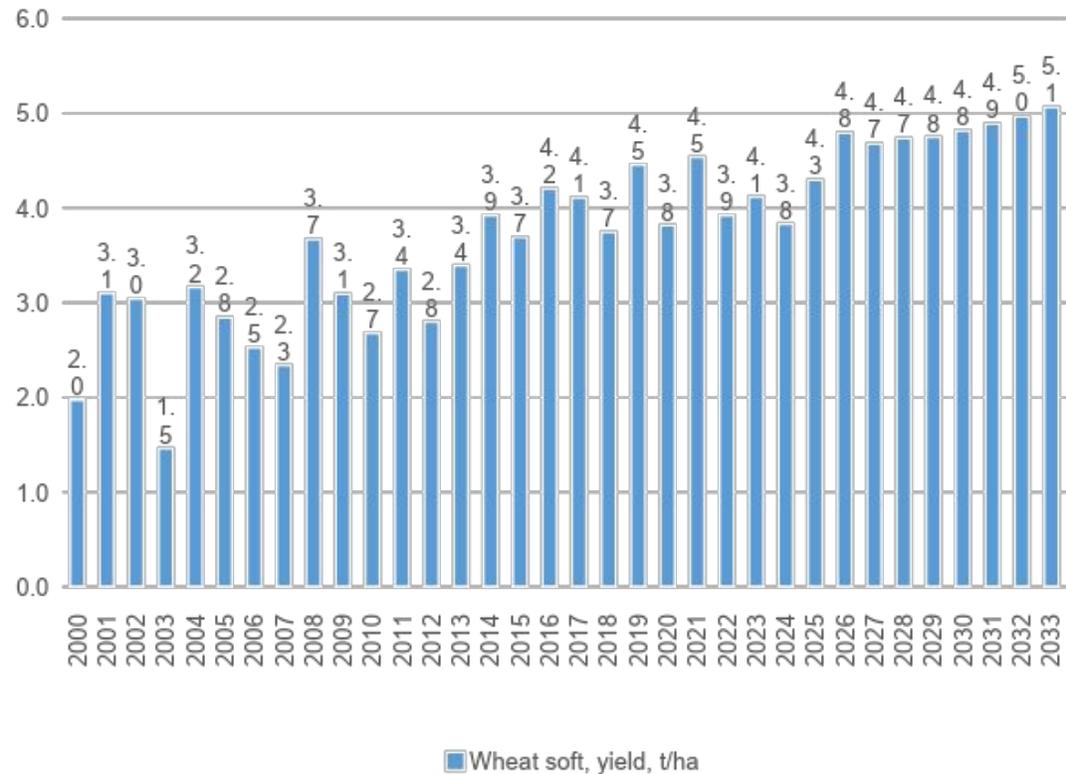


Decline in wheat cultivation area due to:

- Shift from grains to oilseeds, reducing overall grain area.
- Decreased proportion of wheat within total grain area.

Reduction in wheat's share of total grain area is driven by shift towards maize.

# Soft wheat

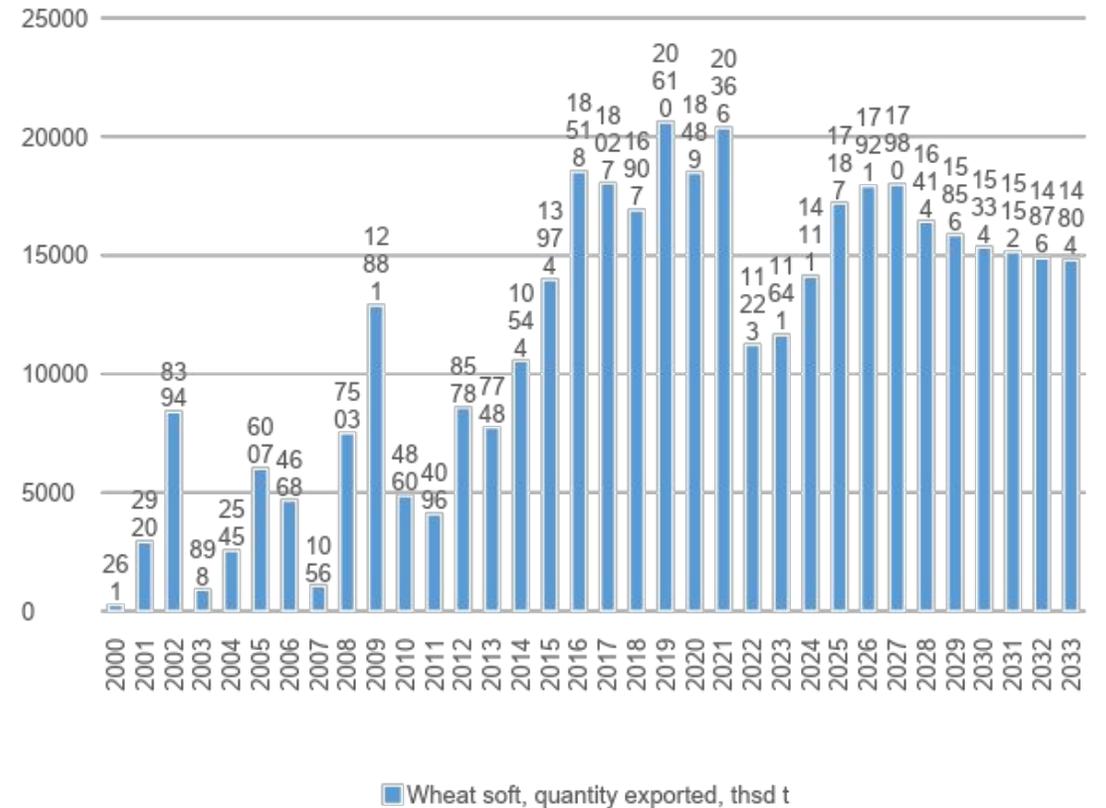
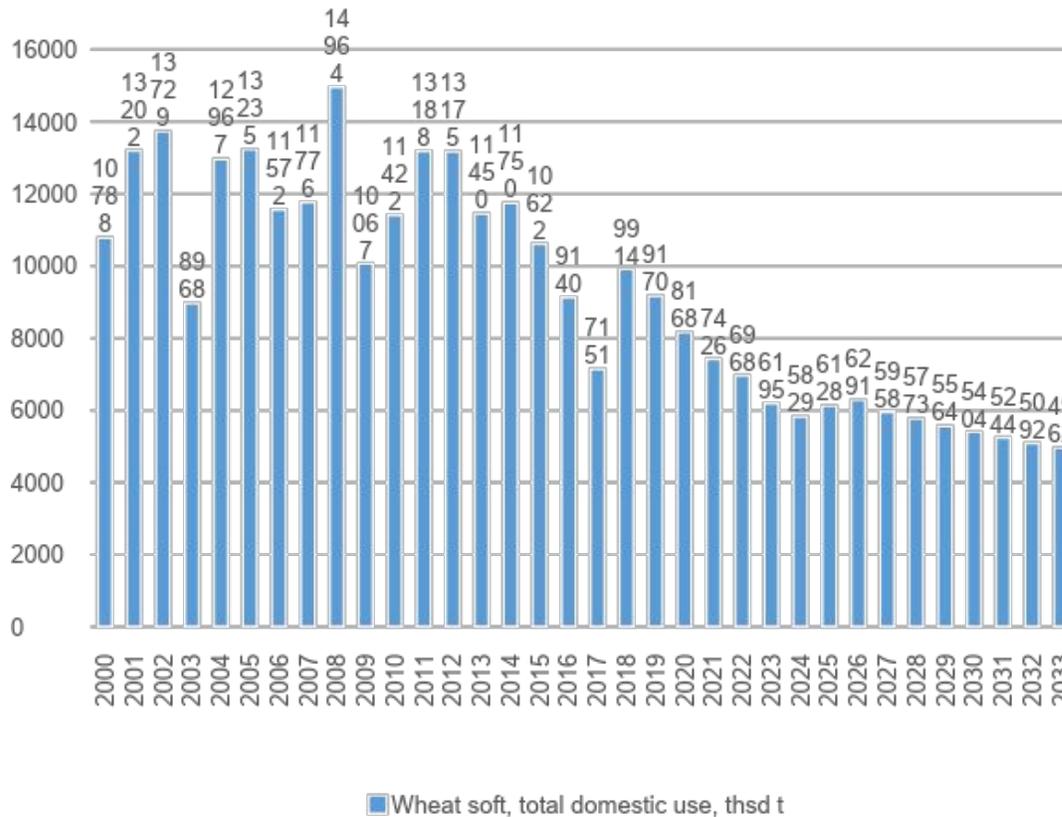


Yield improvements will continue the existing trend, driven by innovations in agricultural practices and intensification in wheat production. *By 2033, the average yield will still not reach the average yields in Germany and France.*

Production will have downward trend due to a reduction in cultivation area; however, the decrease will be less pronounced due to improvement in yield.

\* t refers to metric ton

# Soft wheat



Decrease in domestic wheat consumption is attributed to:

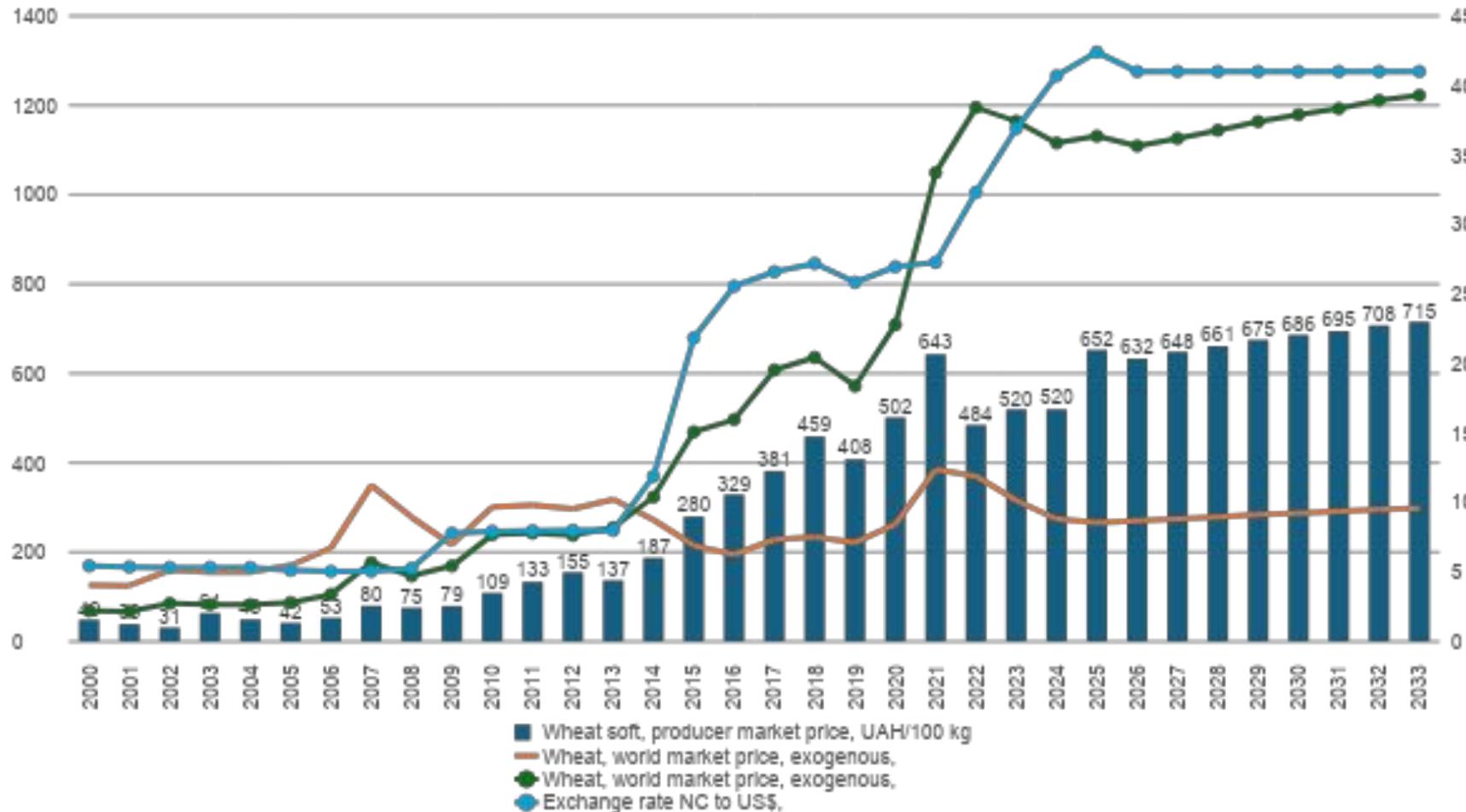
- Reduced per capita consumption of wheat;
- Decreased use in feed, linked to a decline in number of livestock.

Increase in wheat exports projected post-war due to return of territories. Exports will follow a declining trend, aligned with the decrease in production levels.

Wheat imports remain below 70 thsd t per year given strong domestic self-sufficiency.

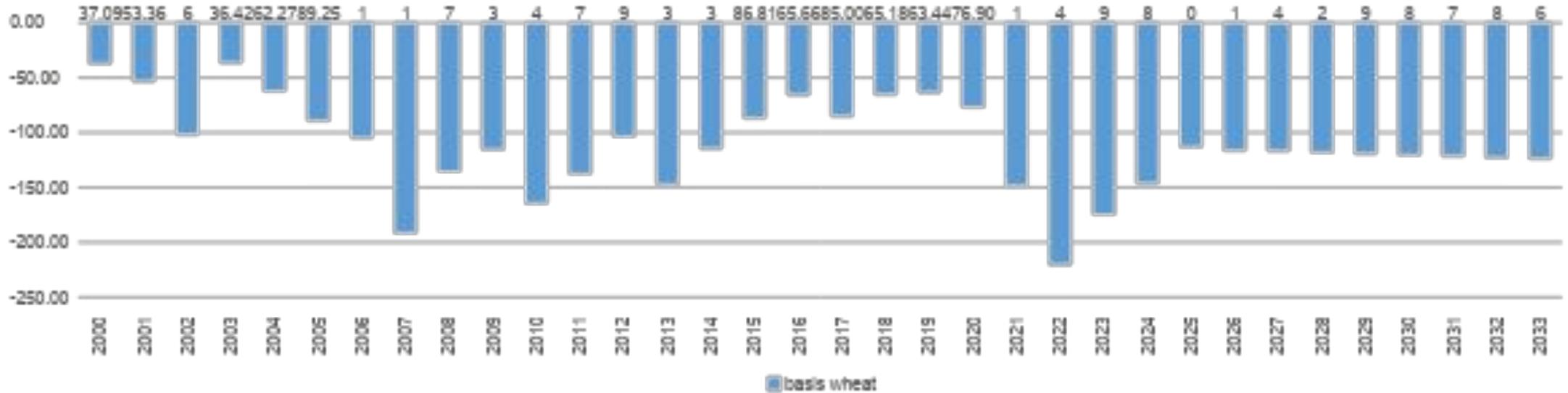
\* t refers to metric ton

# Soft wheat



- Post-war period will see domestic prices trending positively, realigning with world prices.
- Decrease in logistics costs post-war will narrow the gap (basis) between domestic and world prices.
- Slow recovery of the logistics efficiency as well as UAH devaluation will prevent from complete recovery of the price basis.

# Soft wheat. Basis explained

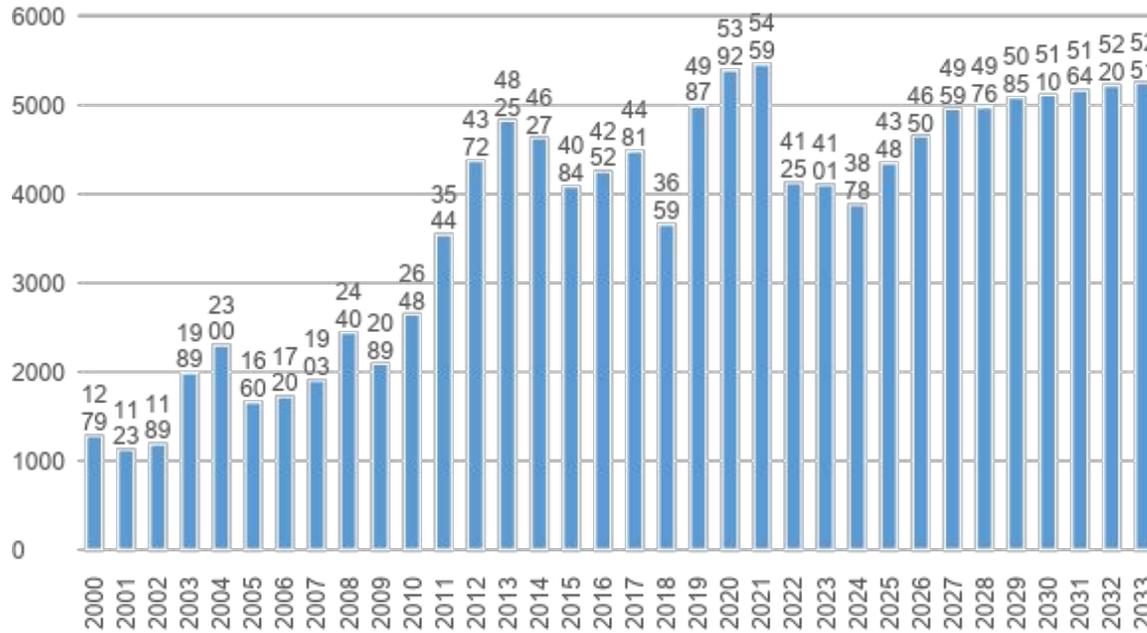


- 2000s: Basis increases (in absolute terms) as low production/domestic consumption ratio keeps prices domestically driven.
- 2010s: Production/domestic consumption ratio rises, aligning domestic prices with world prices; declining basis indicates logistics optimization.
- 2022: Logistics costs surge due to port blockades, widening the basis.
- Post-blockade: Grain deal and Ukraine's grain corridor somewhat mitigate logistics costs, yet basis remains far from pre-war levels.
- Post-war: Domestic prices expected to rise with improving logistics, but gap is not expected to revert to 2021 levels within the decade due to lasting war effects.

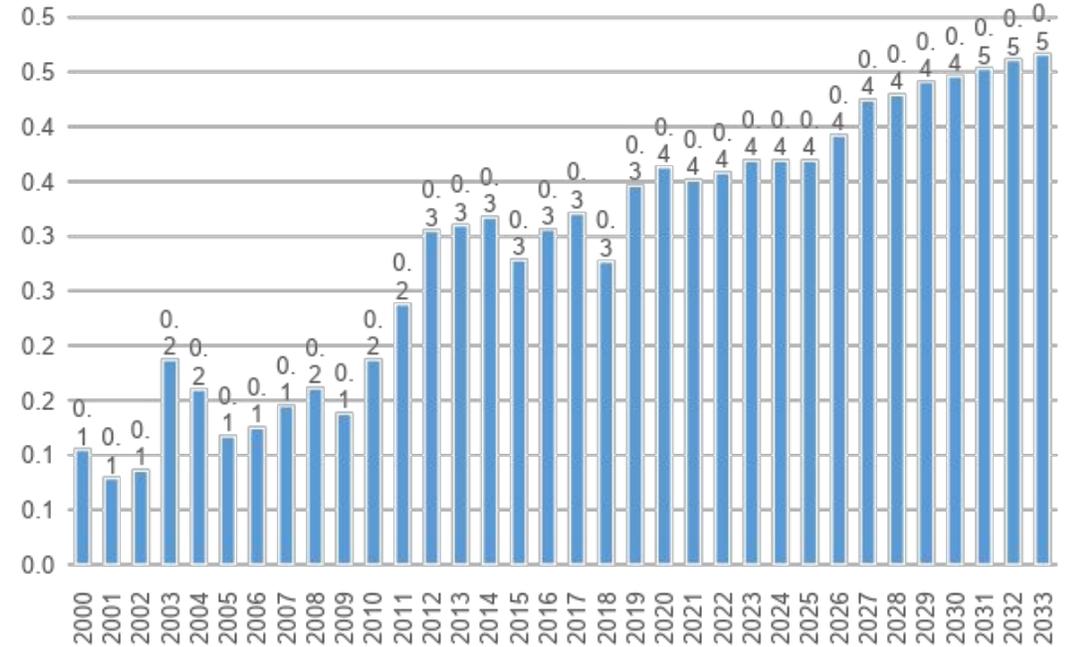
# Maize

- Maize harvested area has been on the rise, driven by favorable climate conditions and higher marginal returns compared to other grains.
- The area saw a 24% decline due to the war but are expected to recover, albeit staying below pre-war levels (96% of 2021 levels by 2033) because of competition from higher-margin oilseeds.
- Production is expected to increase more significantly than harvested area, thanks to advancements in agricultural yields, and is projected to rise in 2033 to almost 50 million tonnes.
- The increase in production is anticipated to lead to an almost proportional increase in maize exports.
- Domestic consumption, accounting for around 20% of total production, is projected to return to 2021 levels with a moderate increase thereafter, driven by expanding poultry industry demand for maize as feed.

# Maize



■ Maize, area harvested, thsd ha

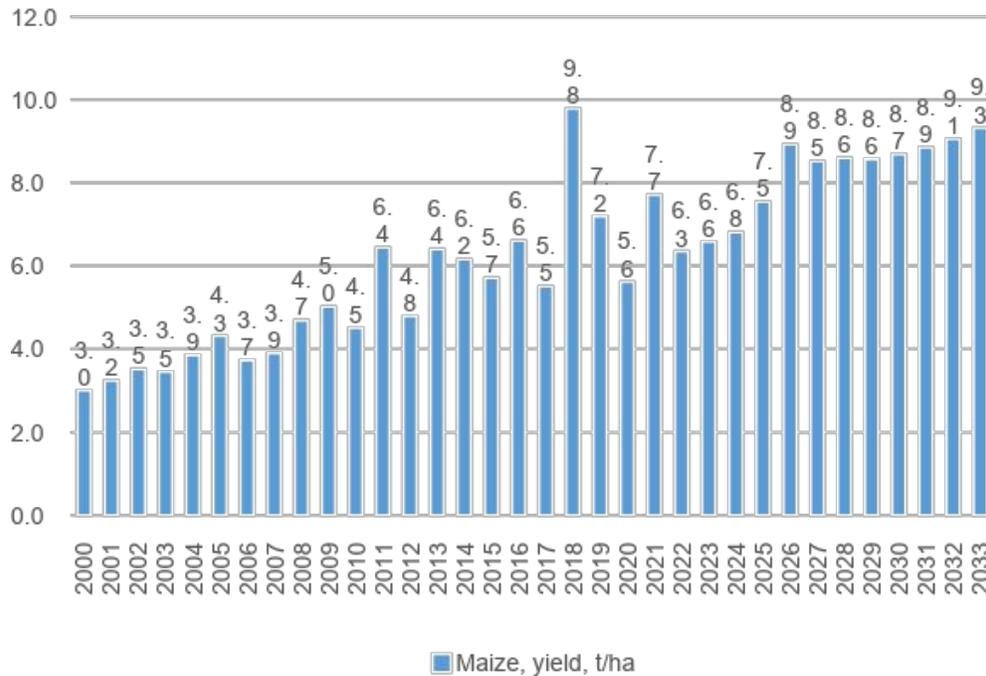


■ Maize, share of grains area harvested, ratio

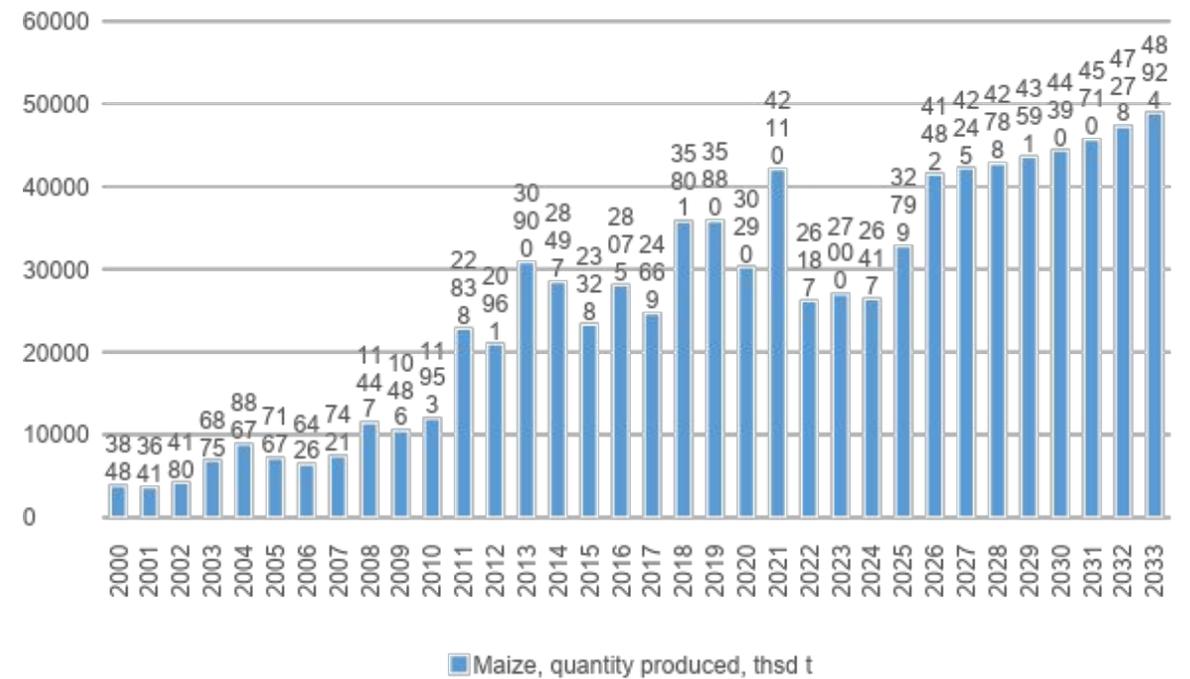
Maize cultivation area will expand driven by ongoing favorable climate trends. Post-2025 area growth will be limited by oilseeds area growth.

Maize share in total grain area will continue to increase, surpassing wheat and other grains, due to higher gross market returns.

# Maize



Positive trend in yield is expected to continue, driven by advancements in agricultural practices.

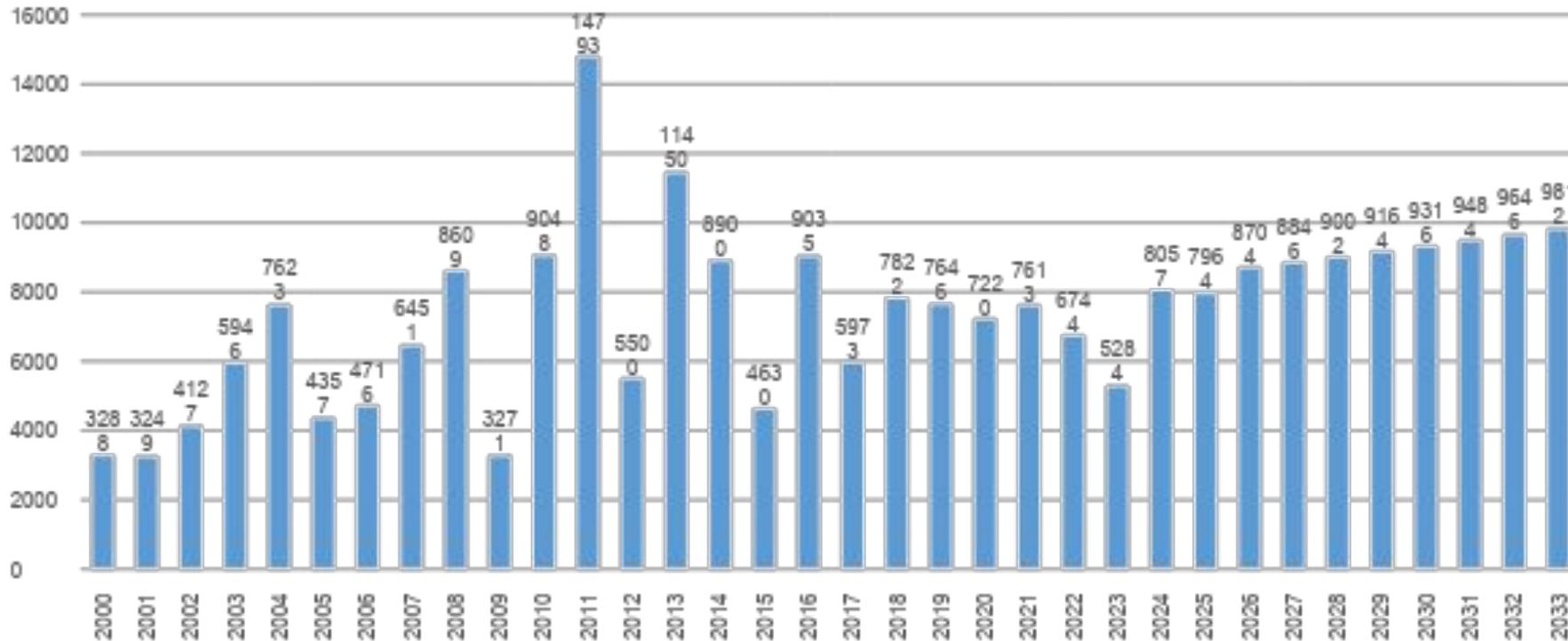


Increase in maize production is attributed to

- expansion in the harvested area;
- enhanced yields.

\* t refers to metric ton

# Maize

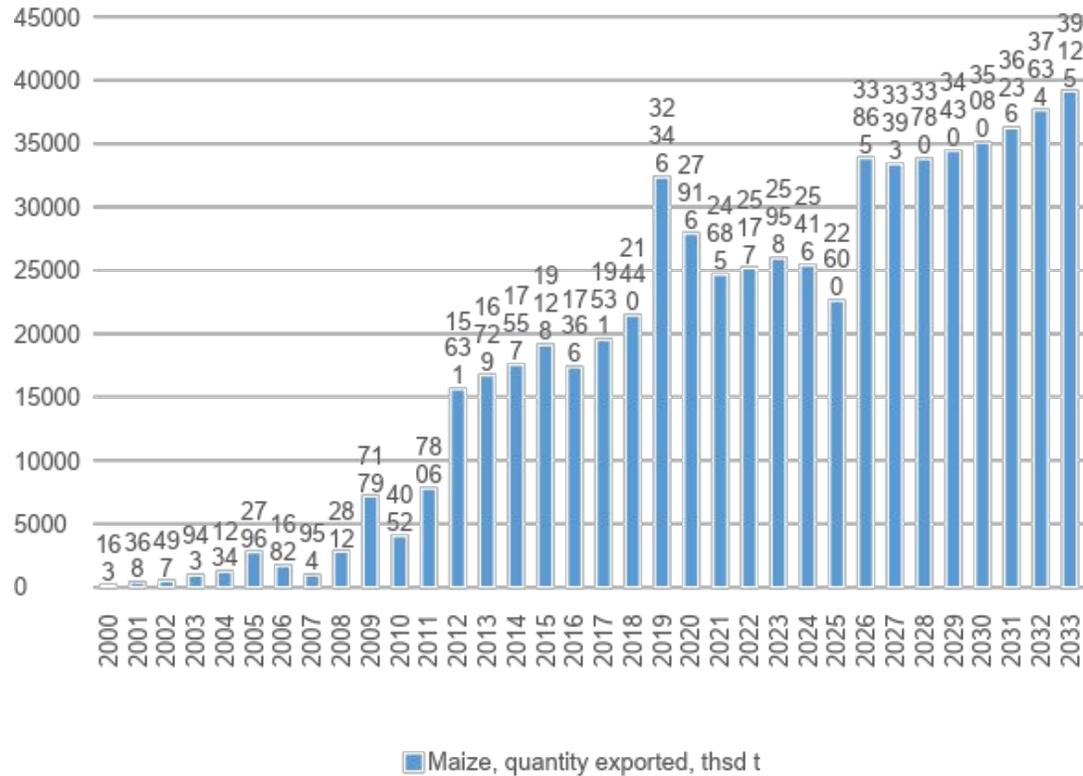


Maize, total domestic use, thsd t

Upward trend in consumption is driven by expanding poultry production, increasing demand for maize as feed.

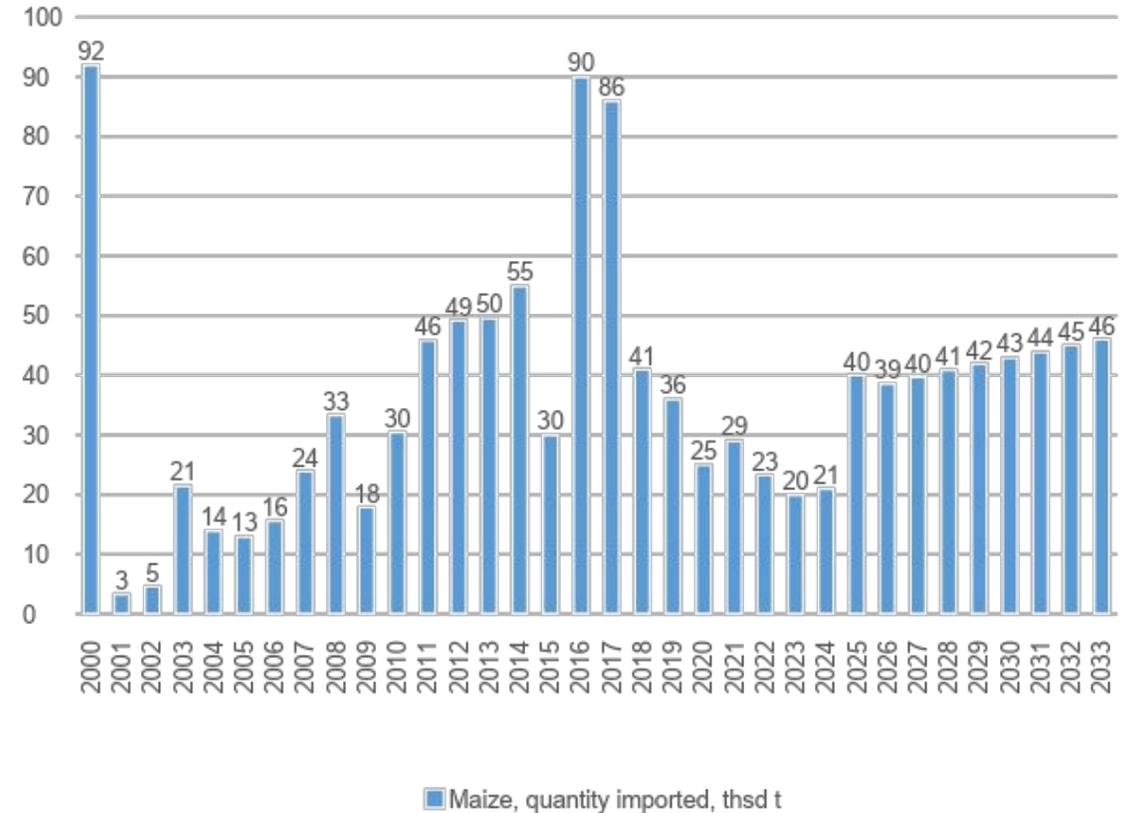
\* t refers to metric ton

# Maize



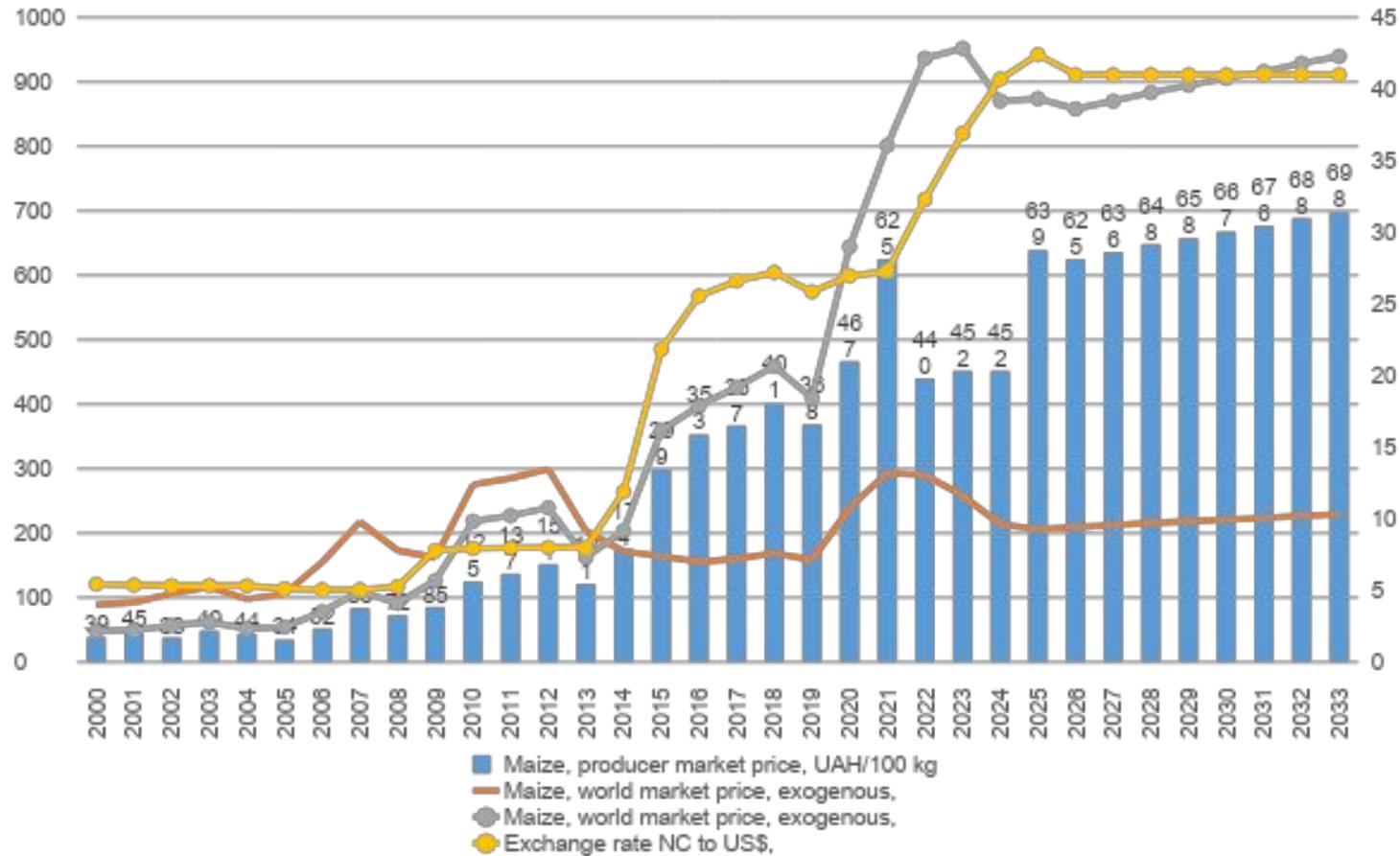
Exports will increase, following positive trend in production.

\* t refers to metric ton



Imports will remain low.

# Maize



Similar to wheat, domestic prices for maize are expected to follow a positive trend, converging with global prices after the war.

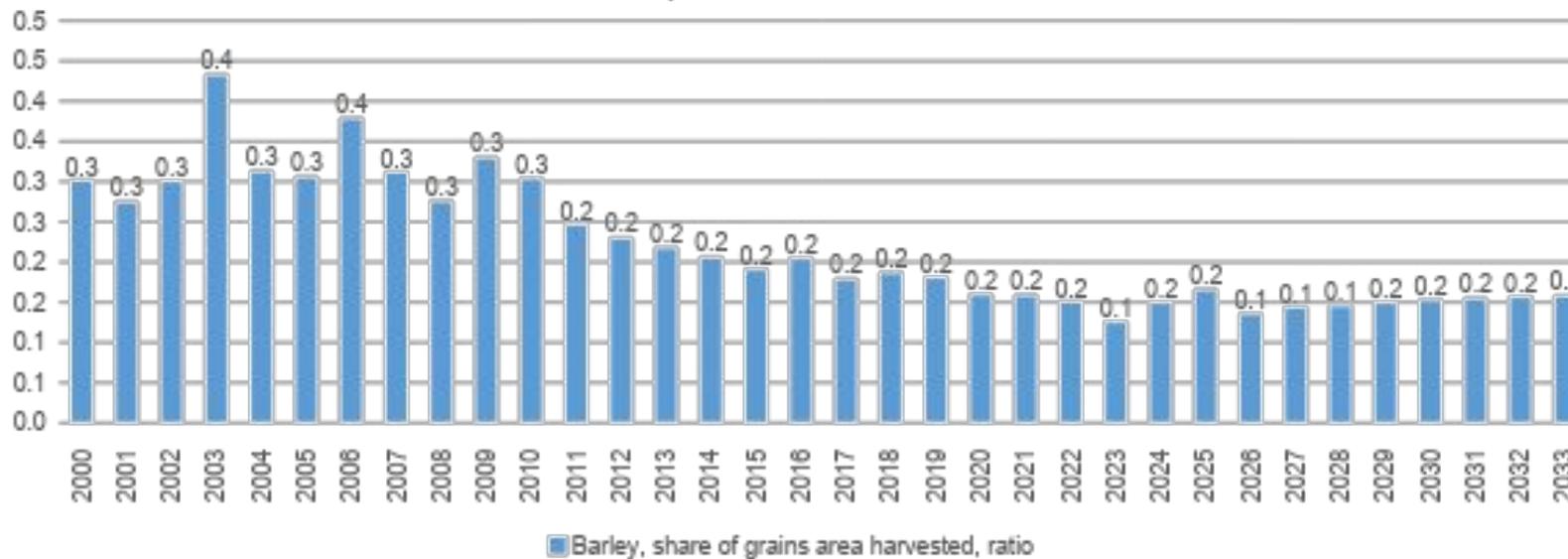
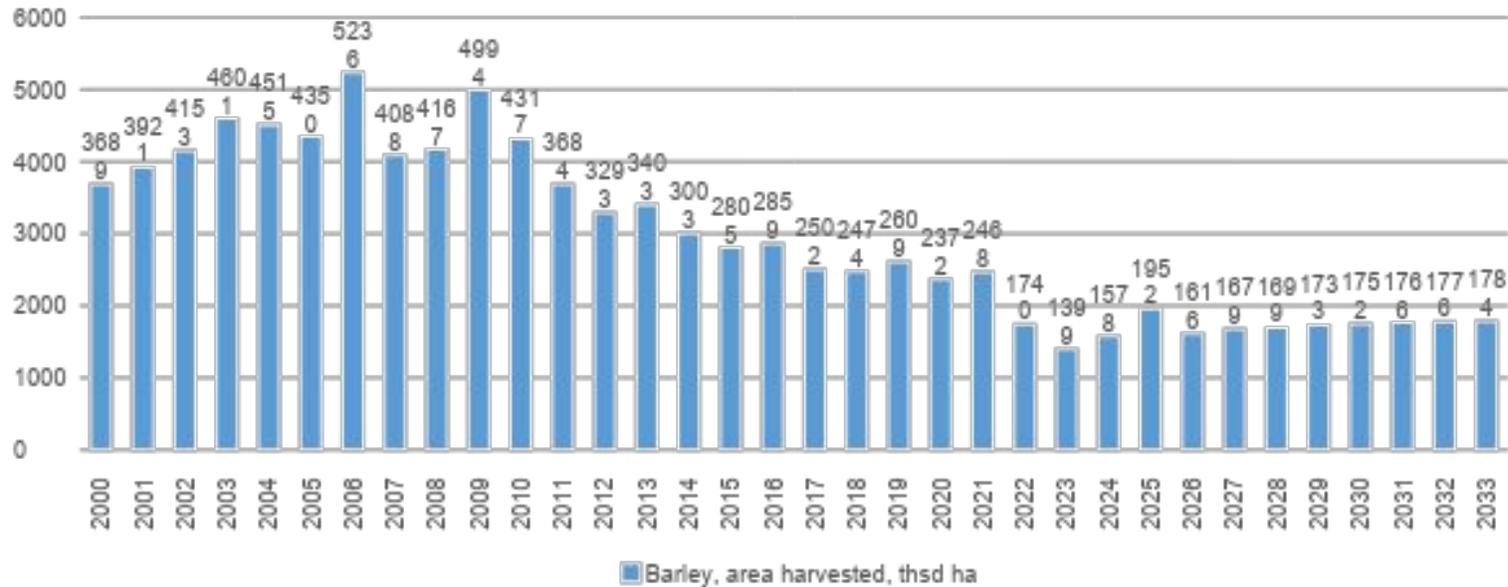
Logistics costs anticipated to decline post-war, reducing the basis between domestic and international prices. However, the UAH devaluation and slow logistics capacity recovery will prevent from return of the basis to the 2021 level.

\* t refers to metric ton

# Barley

- The area dedicated to barley cultivation has been on a decline, with a significant drop due to the war impacting production levels.
- Post-war, the barley area is expected to increase and eventually stabilize at 1.8 mil ha, although it won't reach 2021 levels because of rising competition from oilseeds.
- Production of barley is anticipated to follow an upward trend, starting from below 2021 figures. This recovery reflects both the moderate increase in cultivation area and improvements in yield.
- Exports of barley are set to rise, driven not just by the increase in production but also by changing domestic needs. Currently, domestic consumption accounts for about a third of total production but is projected to continue its decline. This is largely due to the decreasing trend in cattle livestock, reducing the demand for barley as feed.

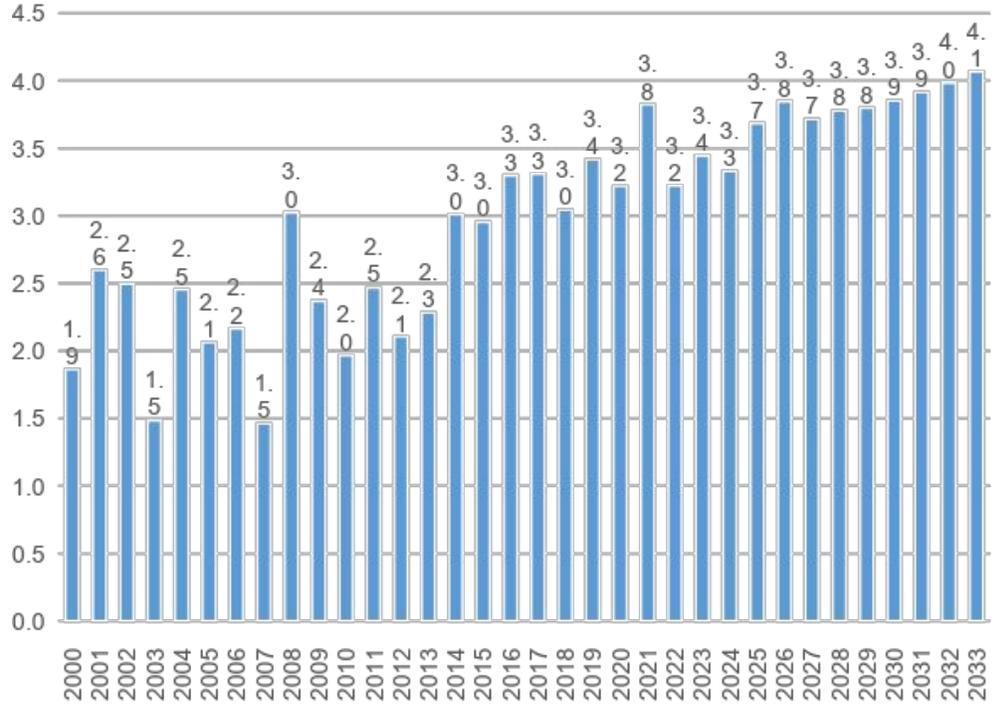
# Barley



Post-war recovery in barley cultivation area is projected, however at lower levels than pre-war due to oilseed expansion.

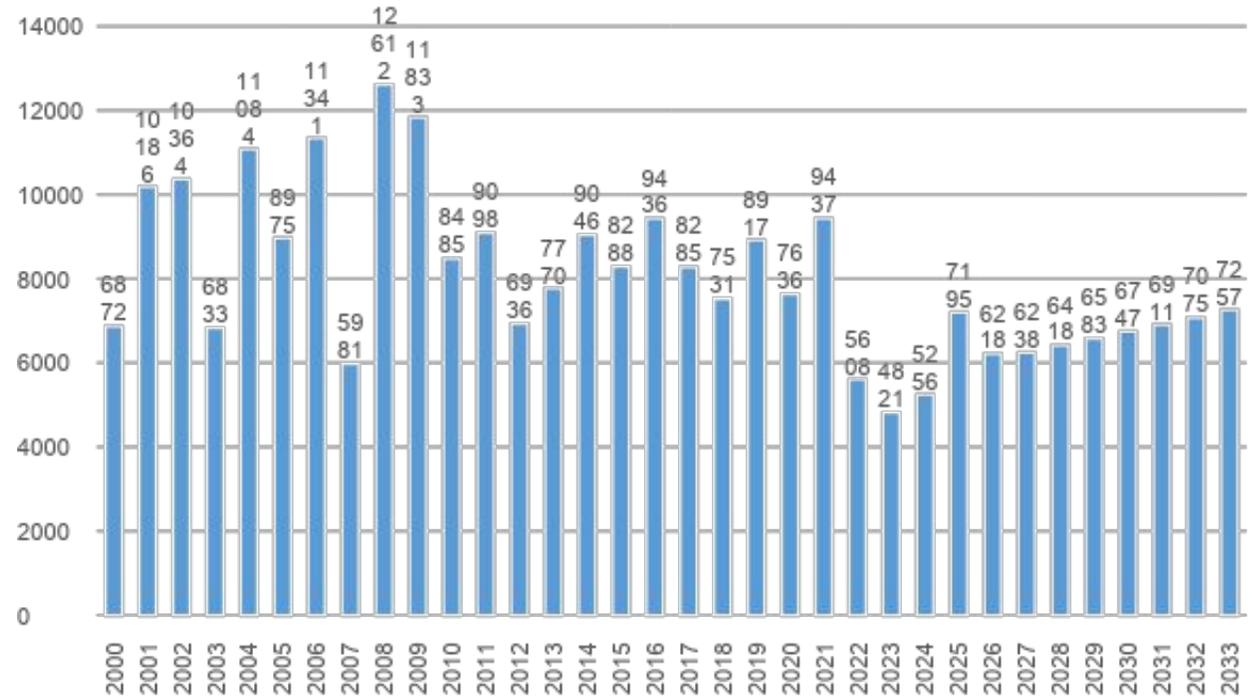
Barley's cultivation area and its share of the total grain area will stabilize.

# Barley



■ Barley, yield, t/ha

Increasing yield, reflecting advancements in agricultural practices and technology.

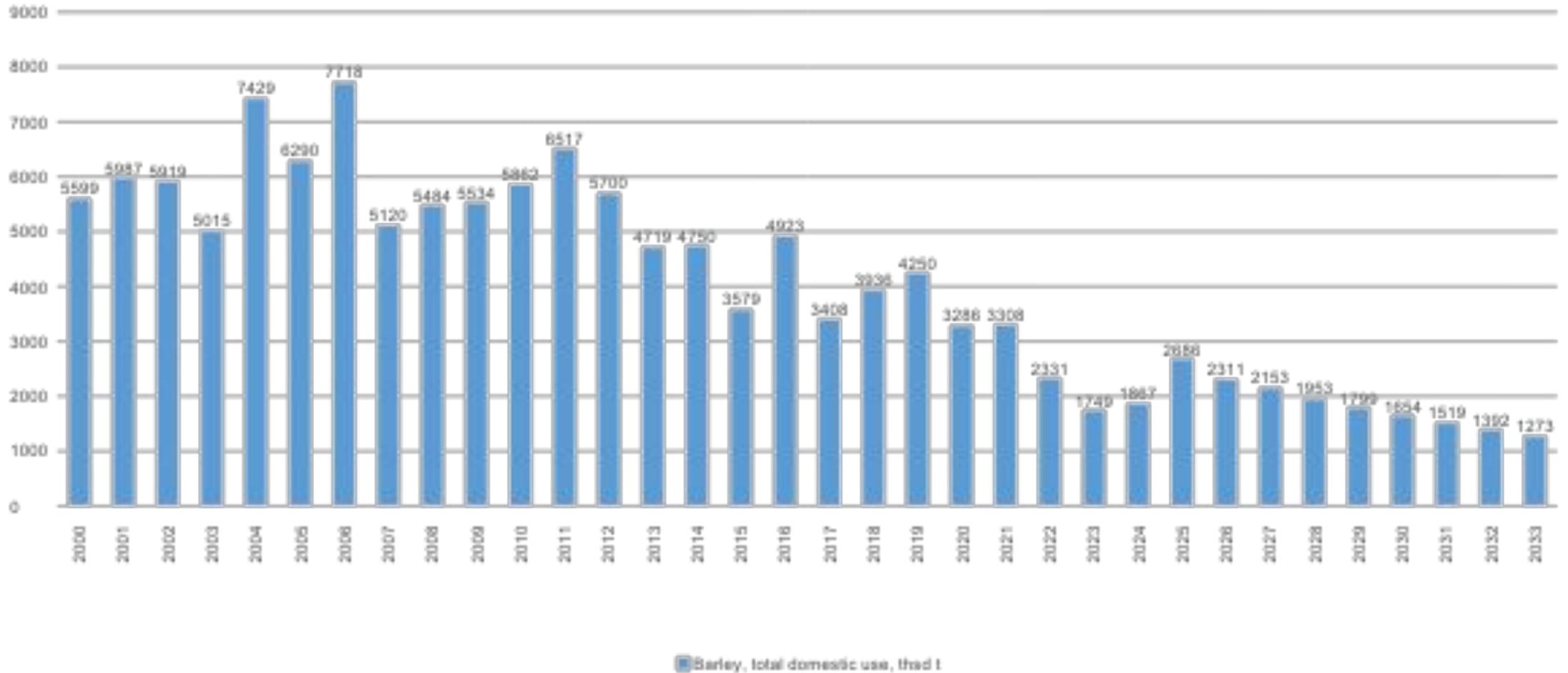


■ Barley, quantity produced, thsd t

Barley production increases despite stable harvested area, driven by improvement in yield

\* t refers to metric ton

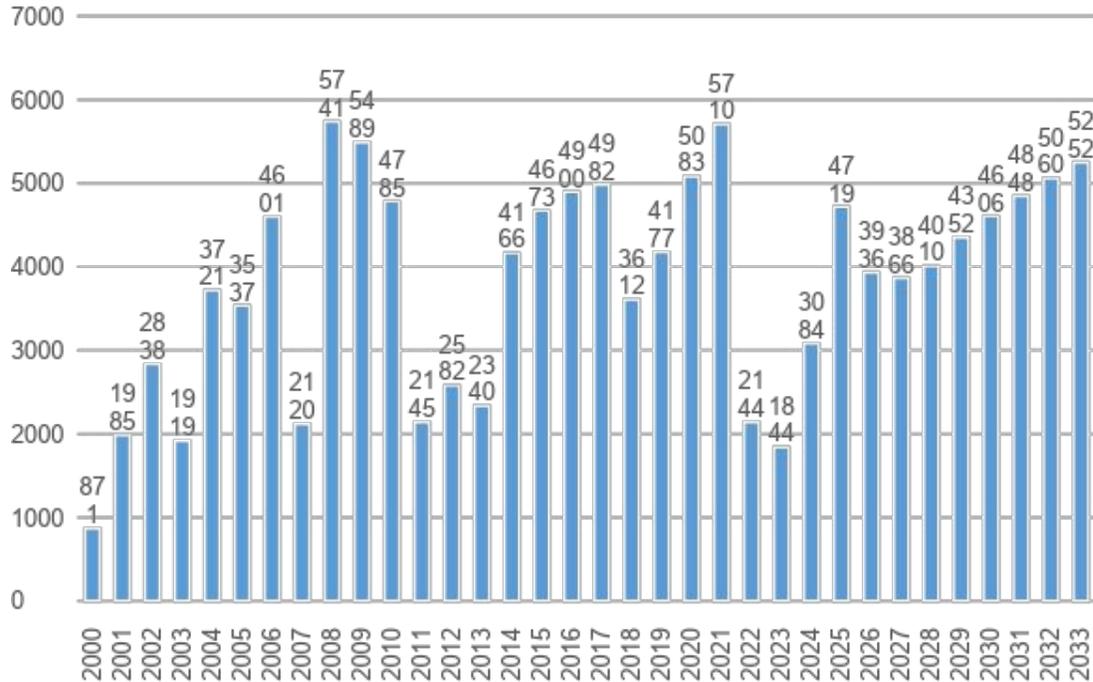
# Barley



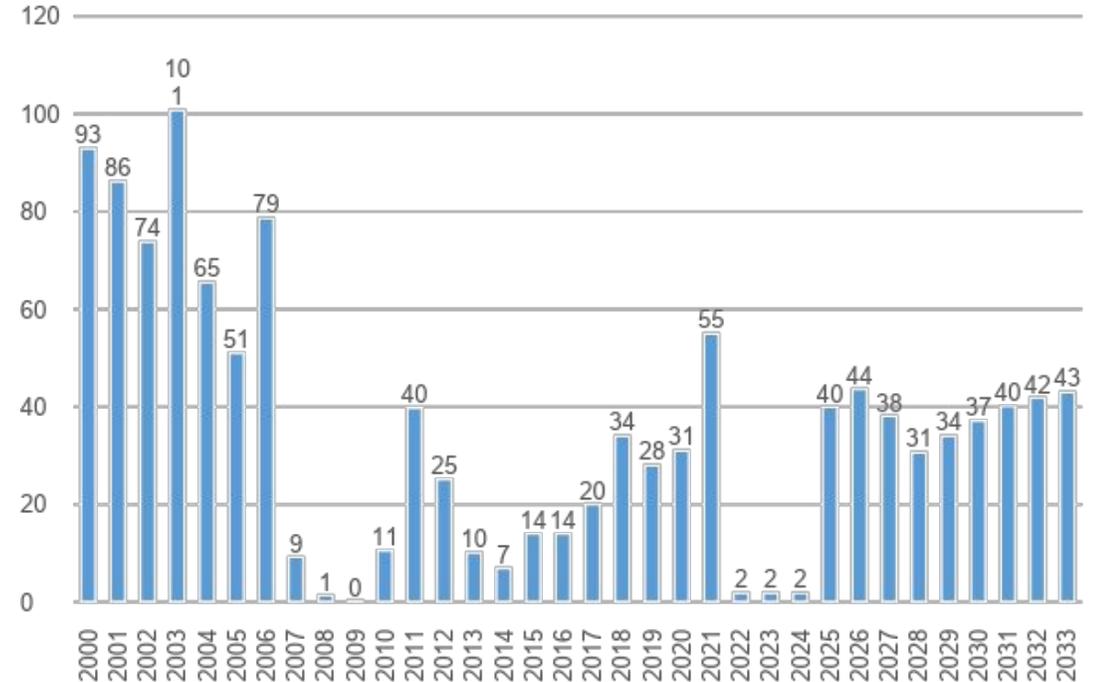
Domestic consumption of barley will trend downward, driven by negative trends in the cattle sector's development.

\* t refers to metric ton

# Barley



■ Barley, quantity exported, thsd t



■ Barley, quantity imported, thsd t

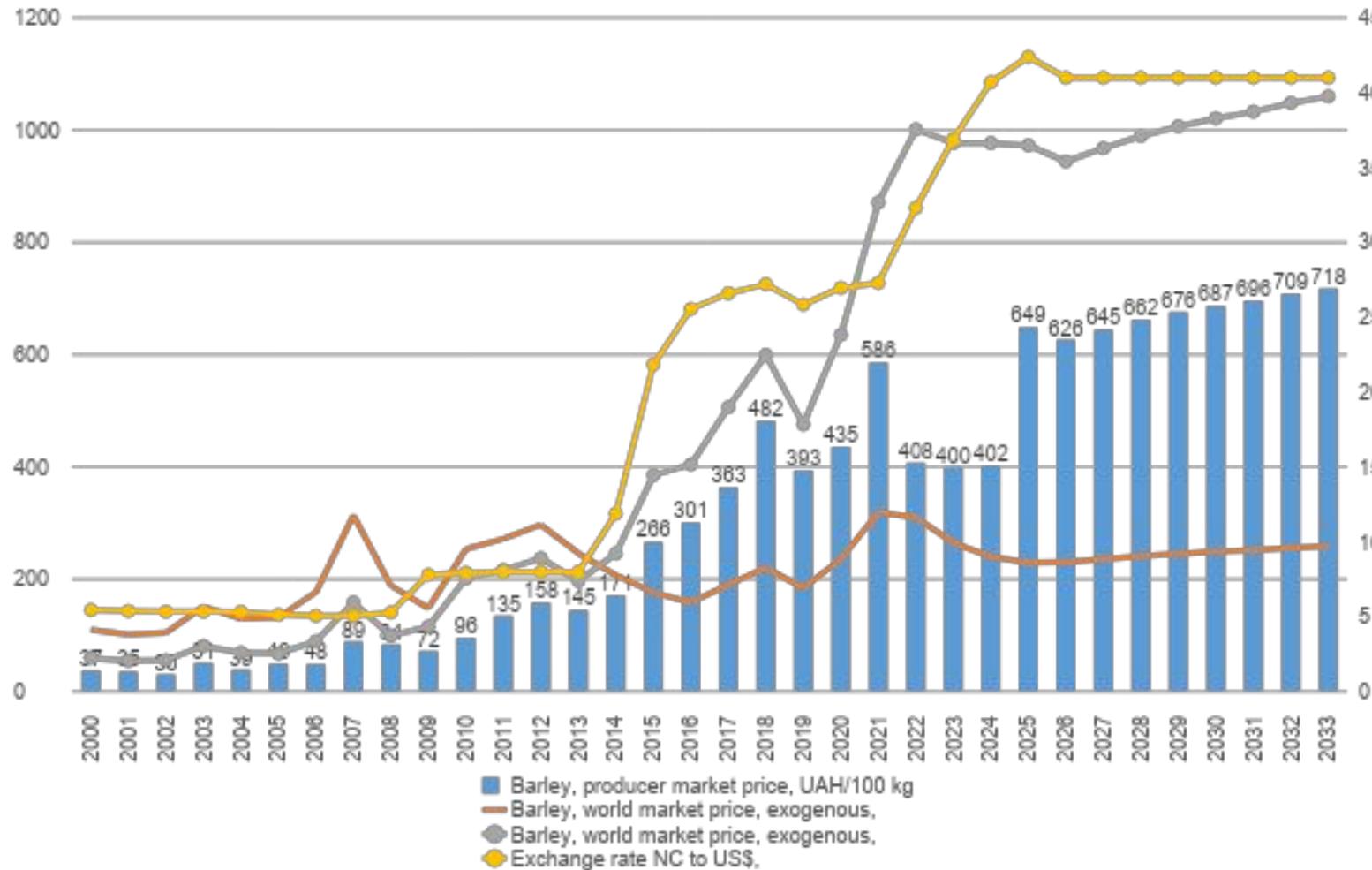
Barley exports will increase due to

- decrease in domestic consumption
- stable production levels

Imports will return to pre-war level and stay relatively low as domestic production meets demand.

\* t refers to metric ton

# Barley



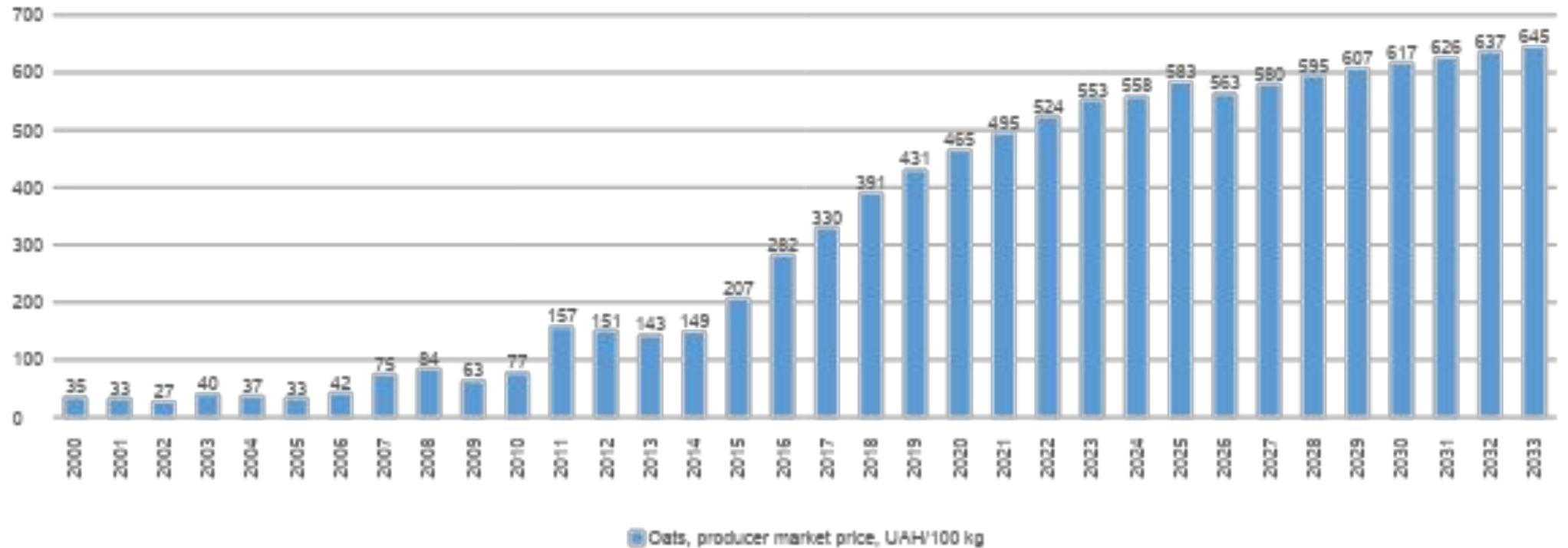
Transaction costs expected to decrease, leading to a lower basis (in absolute terms) and therefore, higher producer prices. However, the UAH devaluation and slow logistics capacity recovery will prevent from return of the basis to the 2021 level.

\* t refers to metric ton

# Oats

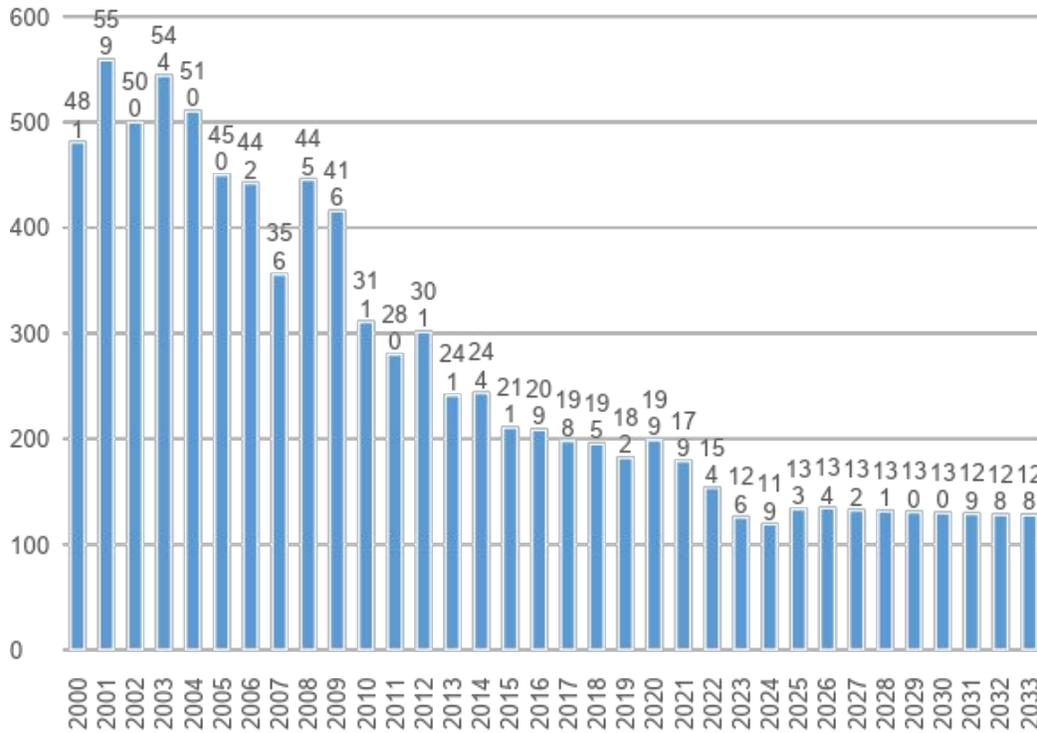
- Oats cultivation has experienced a steady decline over the years, with projections indicating stabilization at just over 1% of the total grain area.
- Currently, more than 90% of oats production is dedicated to domestic consumption, with approximately half used for feed and the remainder for non-feed purposes.
- Post-war, exports of oats are anticipated to recover but are not expected to exceed 15% of total production equating to ~ 50 thousand tonnes.

# Oats



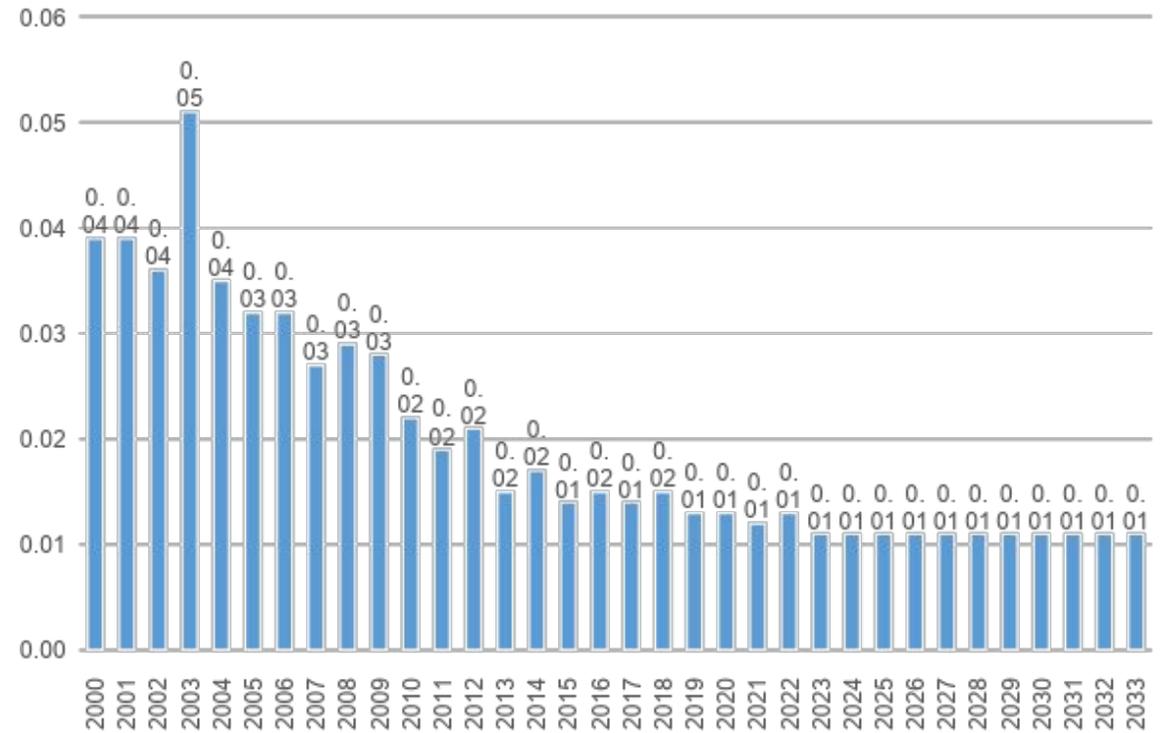
Domestic oats prices are expected to rise.

# Oats



■ Oats, area harvested, thsd ha

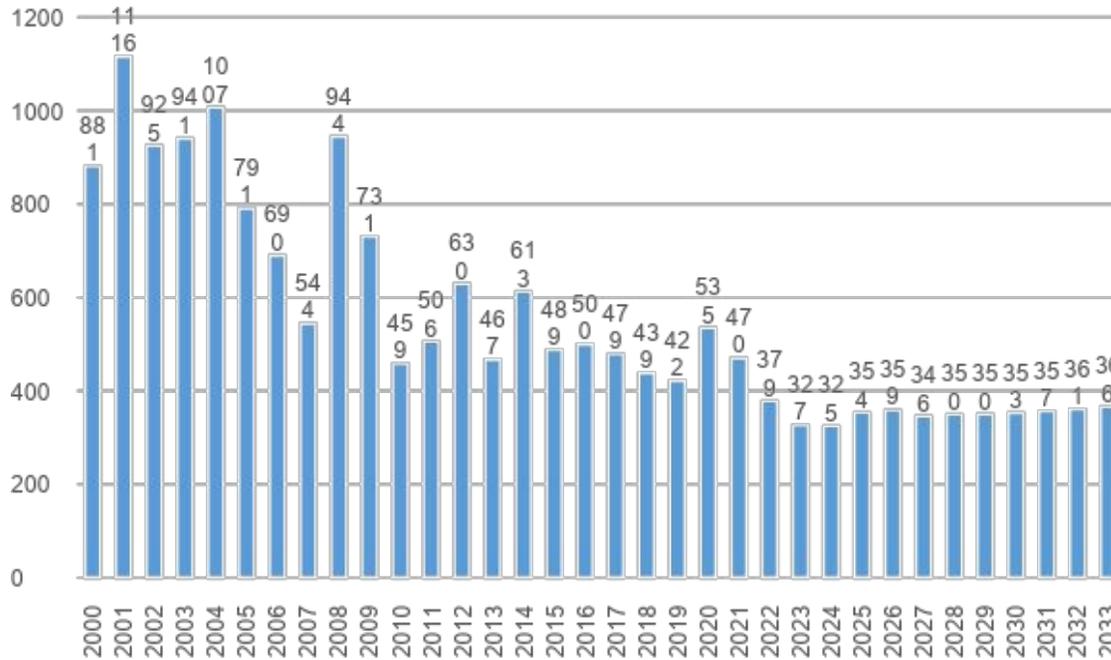
Projected moderate decline in harvested oats area, due to reduced grain cultivation land.



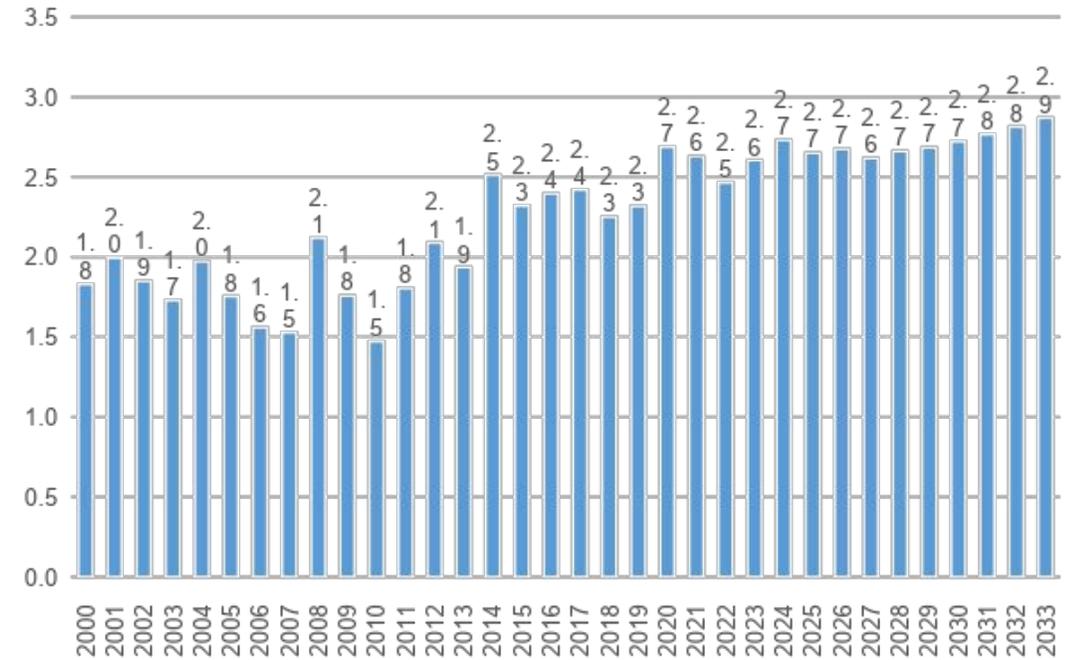
■ Oats, share of grains area harvested, ratio

Oats share of total grain area expected to maintain at 1% due to low gross market returns per unit of land.

# Oats



■ Oats, quantity produced, thsd t



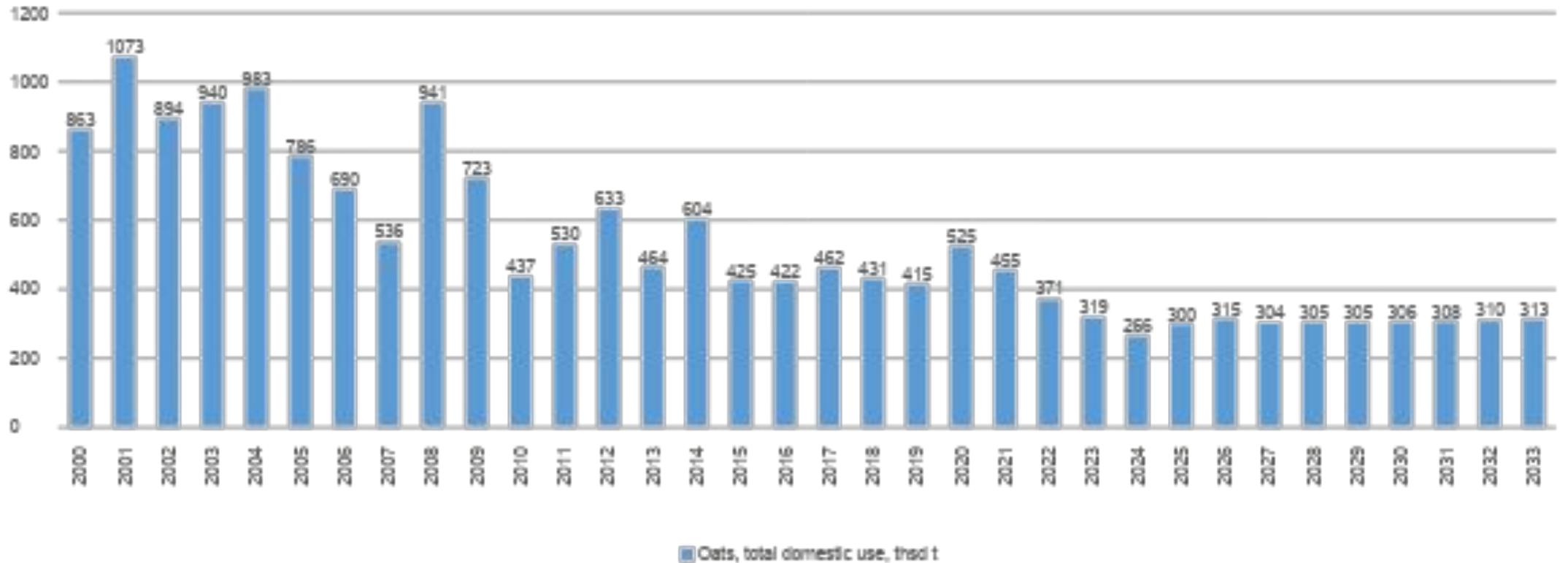
■ Oats, yield, t/ha

Despite the decrease in cultivated area, the quantity of oats produced is expected to have a moderate positive trend, thanks to improvements in yield.

Yield follows general positive trend of technology improvement.

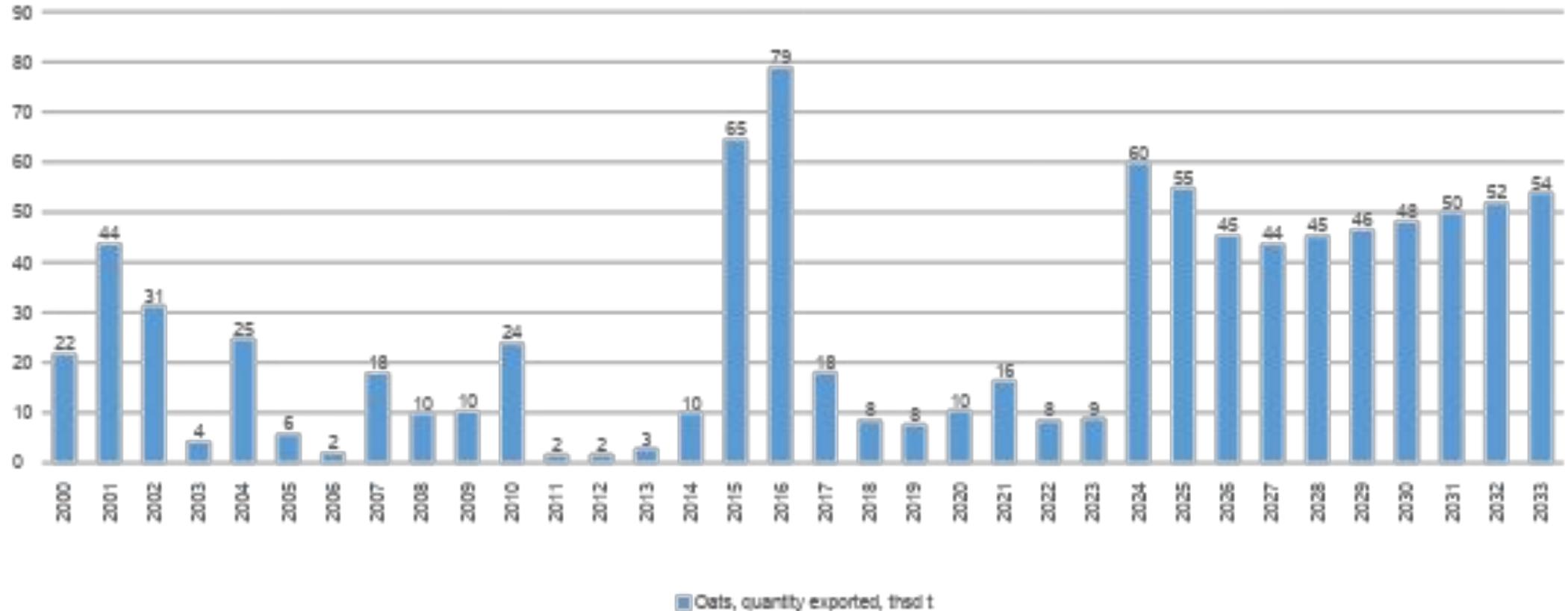
\* t refers to metric ton

# Oats



Domestic use will remain relatively stable after 2022.

# Oats



Exports are to experience a modest increase aligned with the production growth due to enhanced yields.

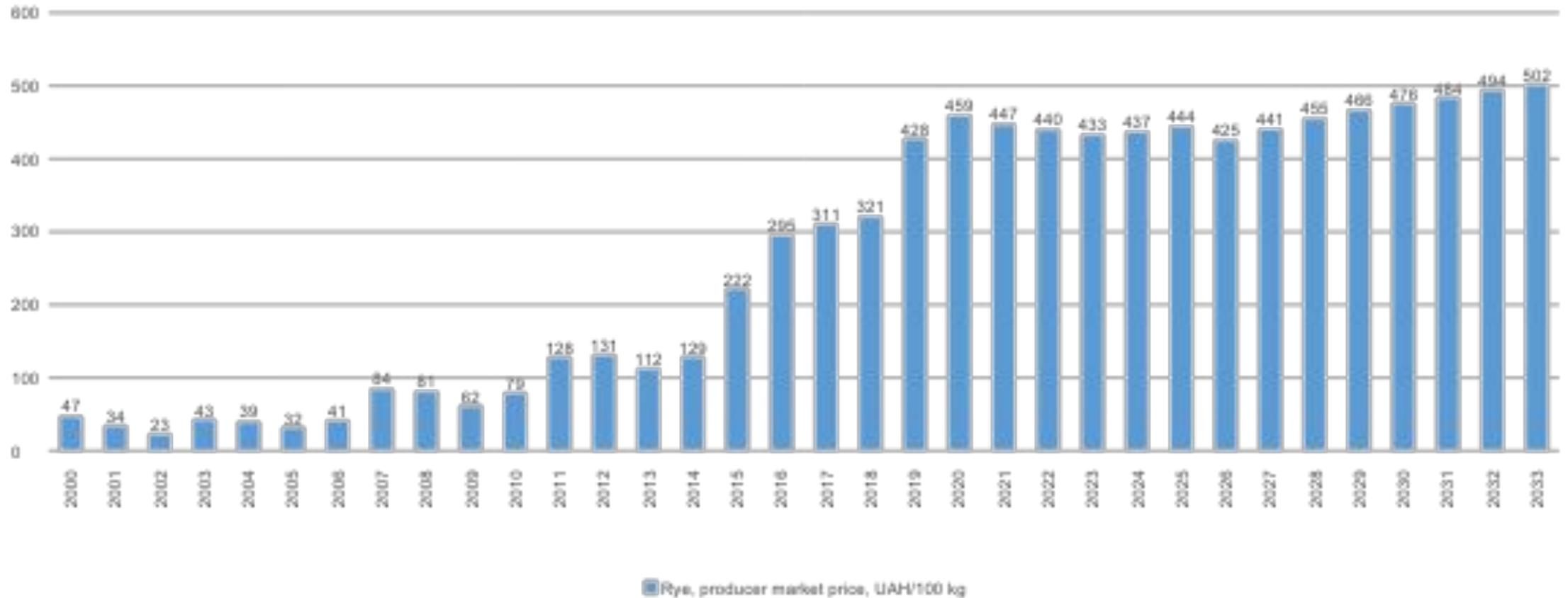
Import levels will remain around 1 thsd t per year, reflecting the ability of domestic production to meet internal demand.

\* t refers to metric ton

# Rye

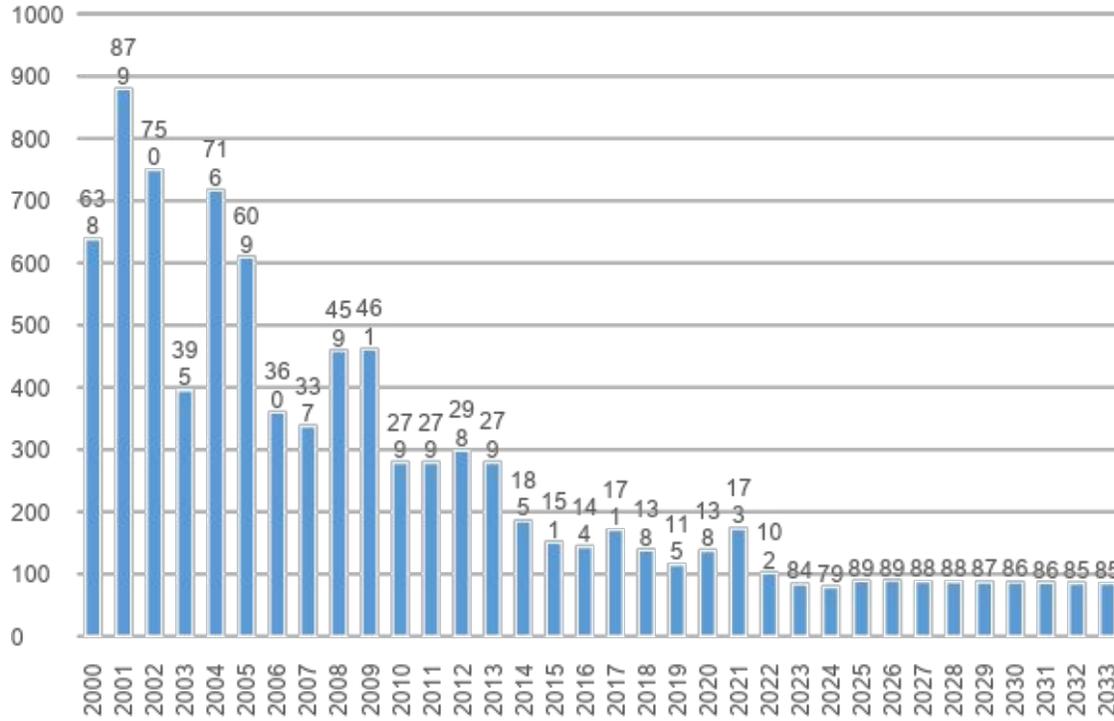
- Rye's harvested area has been declining over the years due to its lower marginal returns compared to other grains and oilseeds.
- The war caused a significant drop in domestic rye production for 2022-2023, leading to the need for imports to cover 10-20% of domestic consumption.
- After the war, an expected increase in yield is projected to reverse the trend, enabling production to sufficiently meet domestic needs again.
- By 2033, rye exports are anticipated to grow but will likely not exceed a third of overall production.

# Rye

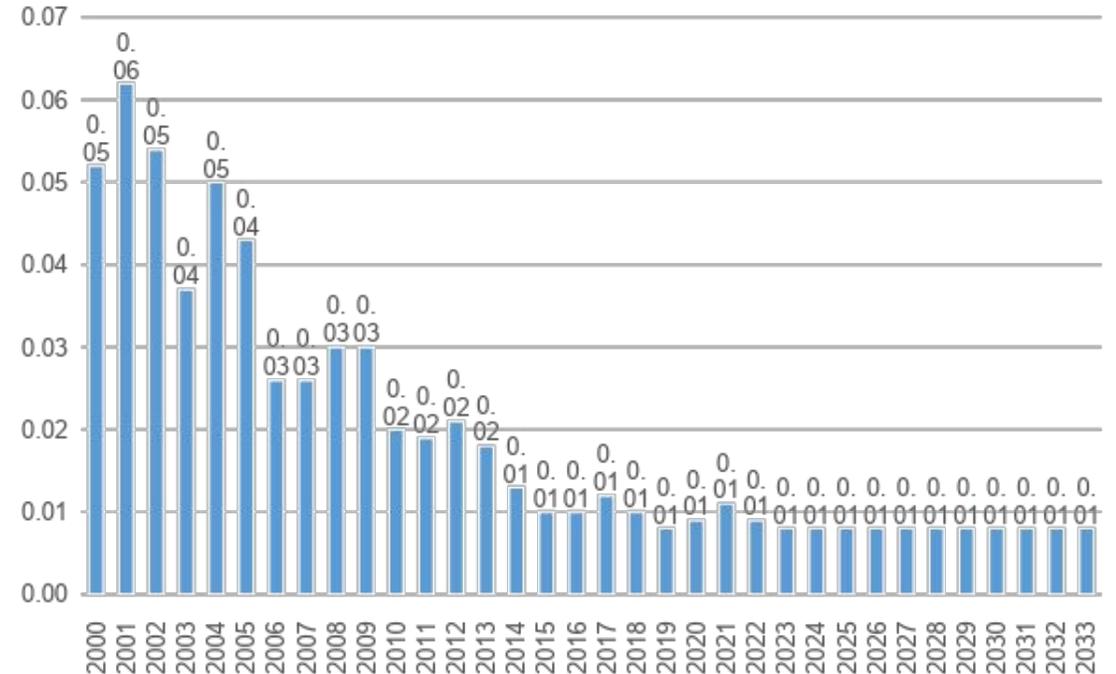


The domestic price of rye is projected to increase, driven by the domestic supply-demand balances.

# Rye



■ Rye, area harvested, thsd ha



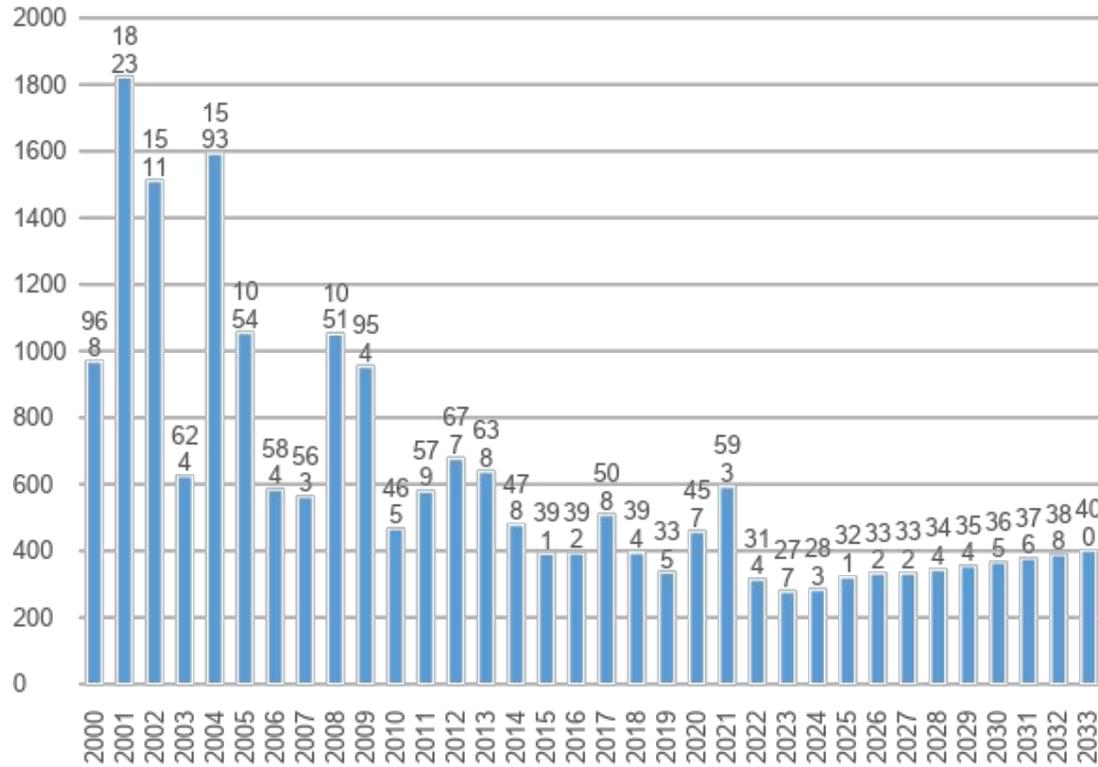
■ Rye, share of grains area harvested, ratio

Decline in rye harvested area due to:

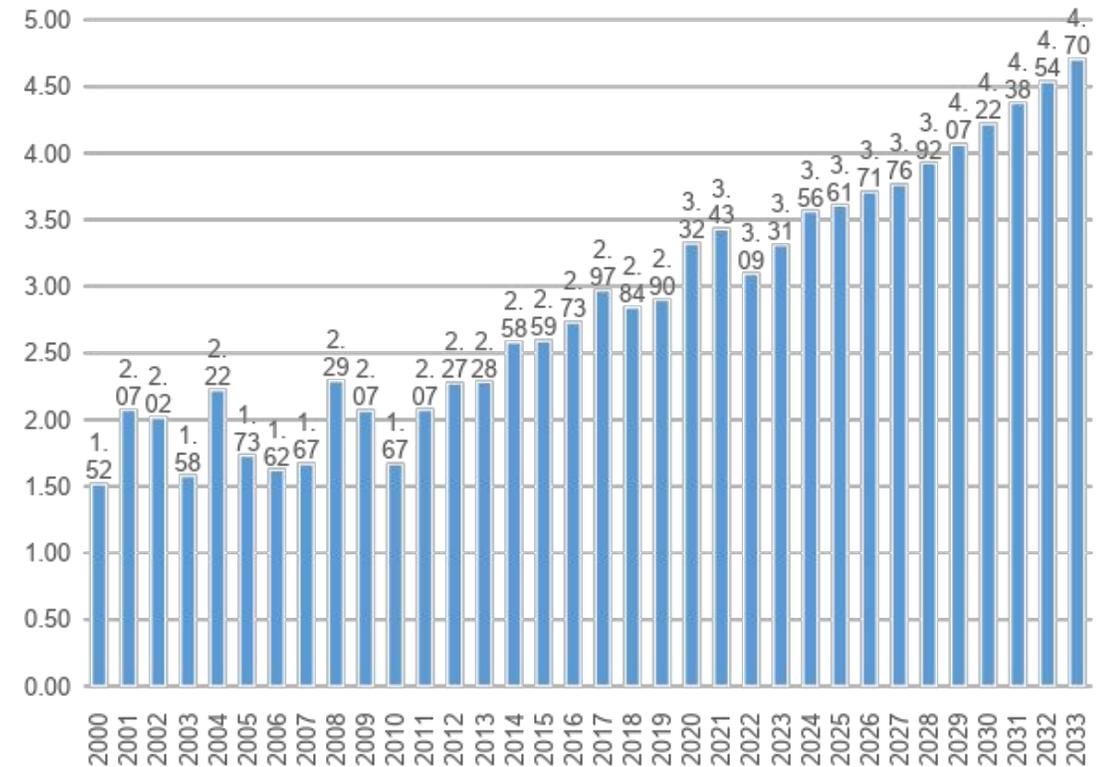
- Decreasing share of rye in total grain area;
- Expansion of oilseeds.

Rye's shrinking share of total grain area driven by lower gross market returns compared to other crops.

# Rye



■ Rye, quantity produced, thsd t



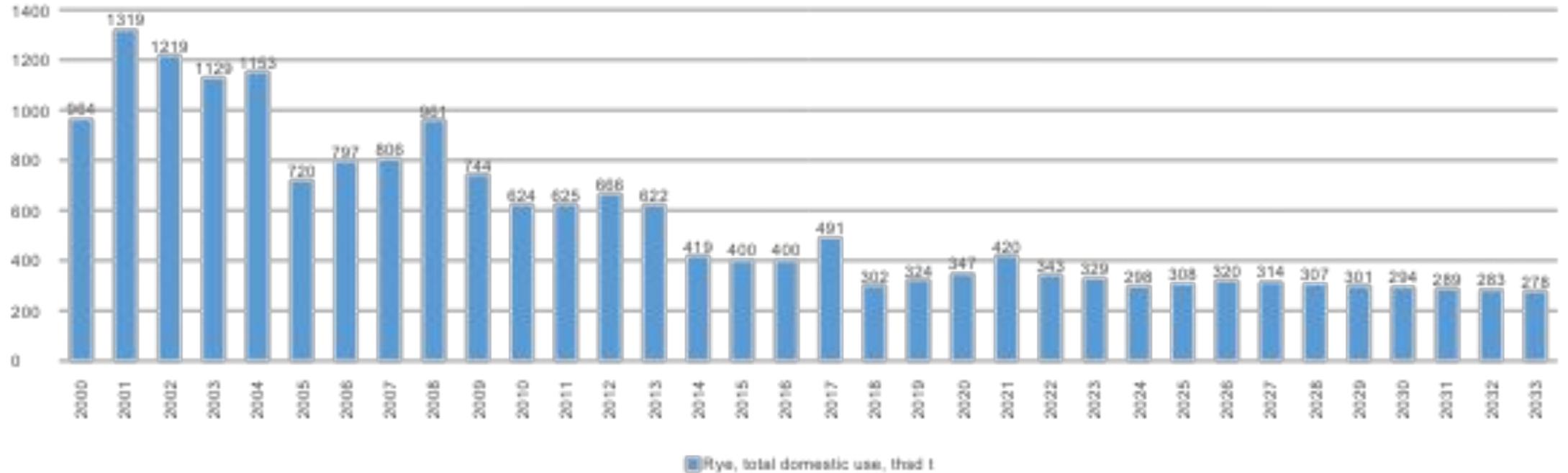
■ Rye, yield, t/ha

Moderate increase in rye production despite reduced harvested area, thanks to yield improvements.

Yield improvements follow general trend of technological progress in farming practices.

\* t refers to metric ton

# Rye

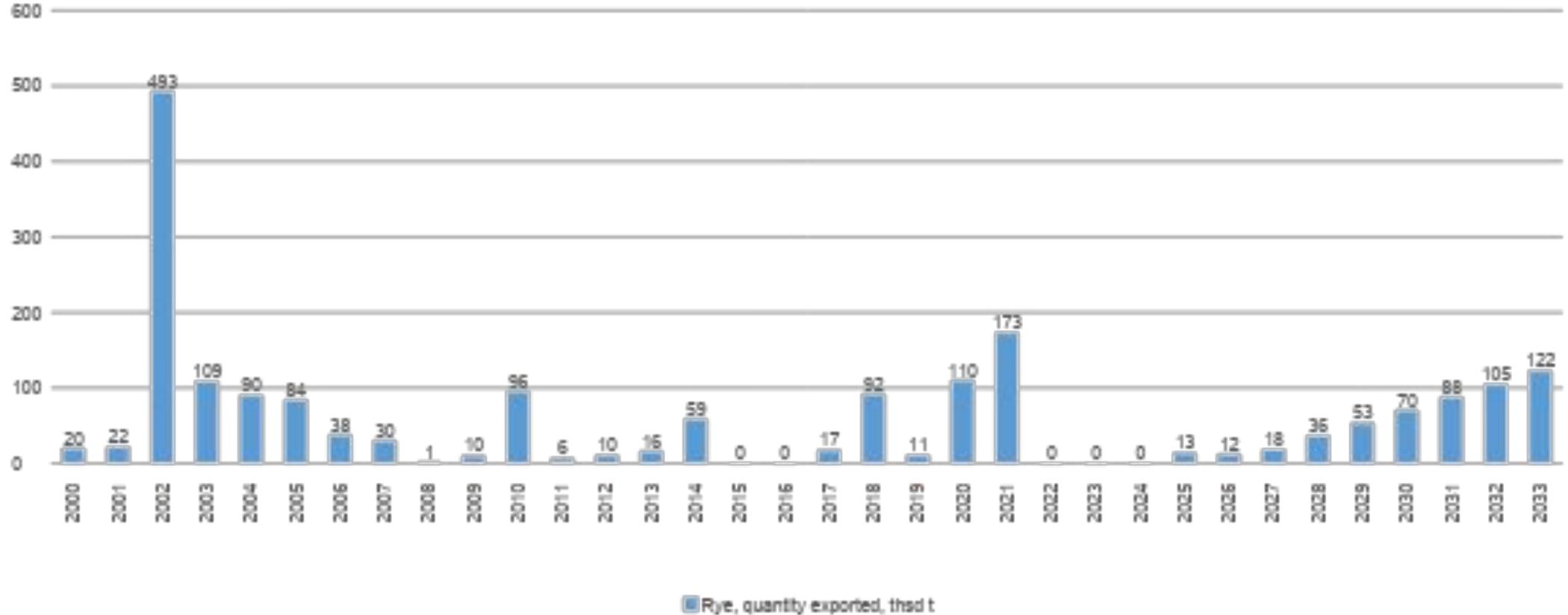


Decline in domestic rye consumption driven by:

- Decreasing per capita consumption trend;
- Reduced feed use, attributed to declining livestock population trend.

\* t refers to metric ton

# Rye



Projected increase in rye exports due to higher production and falling domestic consumption.

Rye imports are expected to stay below 1 thsd tonnes per year.

\* t refers to metric ton

An aerial photograph of an agricultural field, likely for oilseed production. The field is divided into numerous long, narrow, parallel rows of crops. The crops appear to be in various stages of growth, with some rows showing dense green foliage and others showing more sparse, brownish vegetation. A prominent, straight, light-colored path or channel runs vertically through the center of the field, separating the rows. To the right of the field, there is a large, rectangular area of water, possibly a reservoir or a flooded field, with a brownish, turbid surface. The overall scene is a well-organized agricultural landscape.

# 6 Outlook: Oilseeds

# Oilseeds, overview

## Current situation:

- The invasion in 2022 led to a 14% decrease in the total area dedicated to the three main oilseed crops in Ukraine (sunflower, rapeseed, soybean), falling to around 8.7 million hectares.
- The area dedicated to oilseeds cultivation rebounded to 2021 levels by 2023, driven by oilseeds' higher marginal returns compared to grains.
- Although the area recovered quickly, production in 2023 reached only 90% of the 2021 level, totaling 20 million tonnes, impacted by lower yields.

## Projection:

- By 2025, the area is expected to increase by 36%, with production projected to reach 33 million tonnes by 2033. This represents a 64% increase from 2023, attributed to both area expansion and yield improvements.

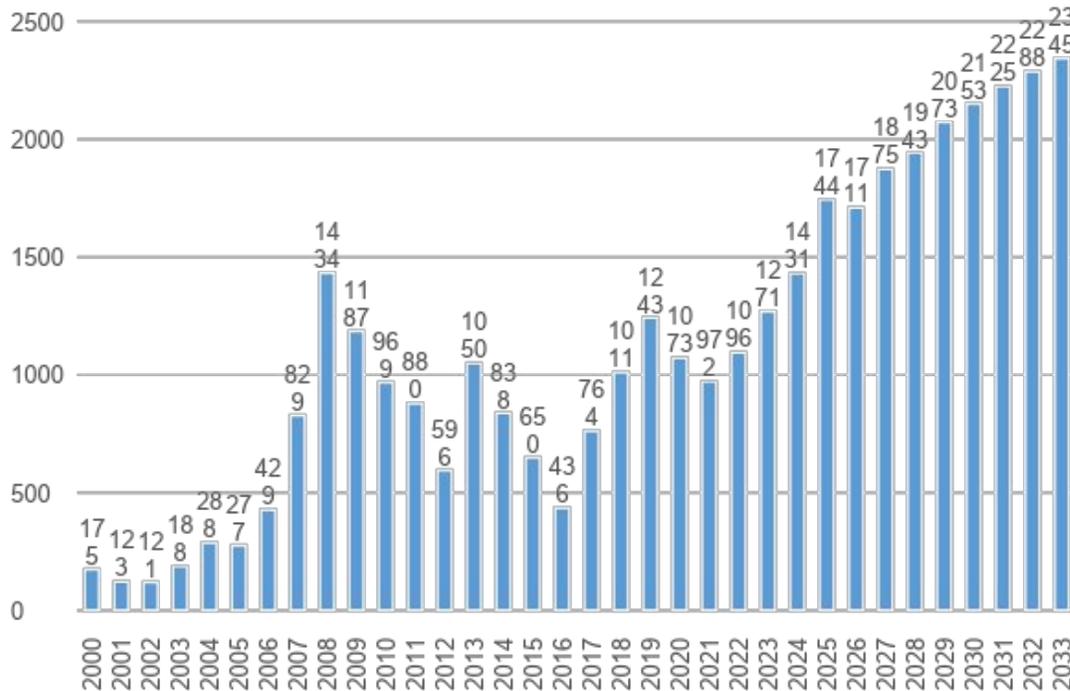
# Rapeseed seeds and its derivatives

Despite previous volatility, the area allocated to rapeseed cultivation has had an upward trend over the last three years, including 2022-2023. This growth is projected to continue through to 2033.

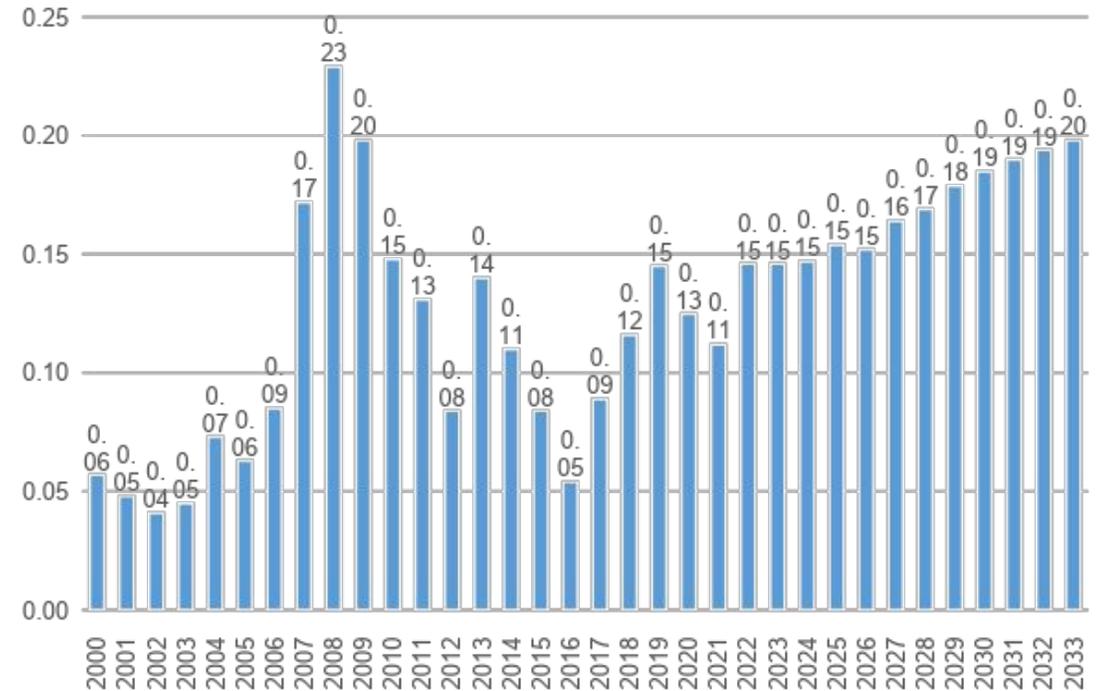
Drivers of expansion:

- Rapeseed currently offers the highest marginal returns per unit of land among oilseeds and this trend is expected to persist over the projected period.
- Rapeseed cultivation enhances soil fertility and is advantageous for crop rotation, contrasting with the more land-intensive sunflower seeds.

# Rapeseed



■ Rapeseed, area harvested, thsd ha



■ Rapeseed, share of oilseeds area harvested, ratio

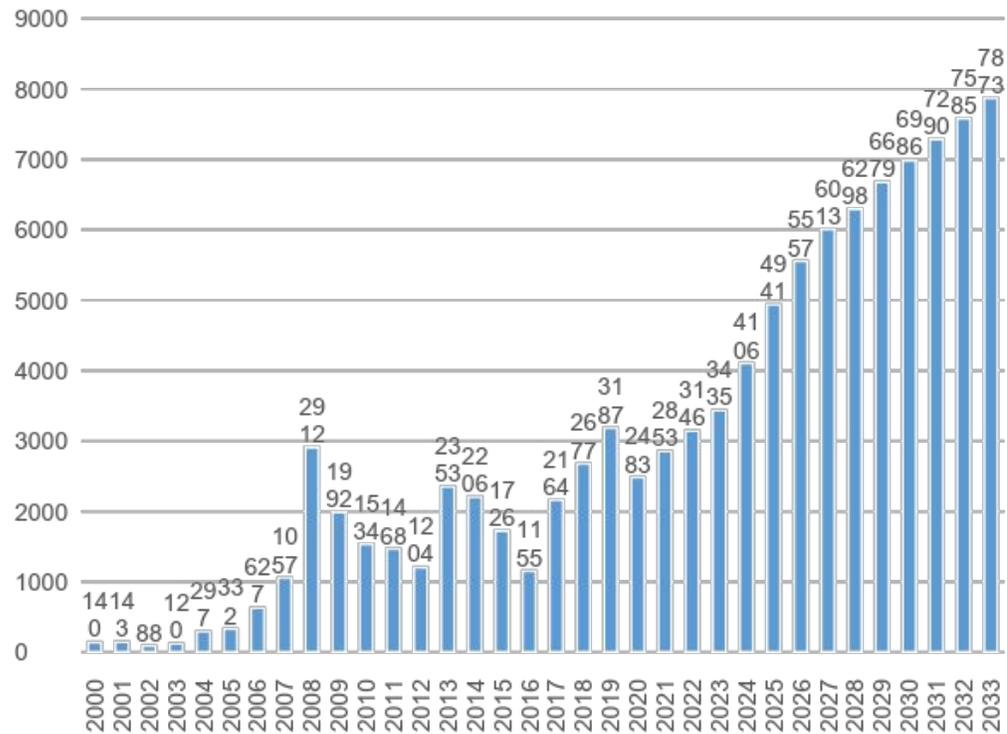
Rapeseed harvested area growth:

- Rise in rapeseed share within the total oilseed area;
- Increase in the oilseed/grain area ratio.

The share of rapeseed area within the oilseed sector is set to increase due to:

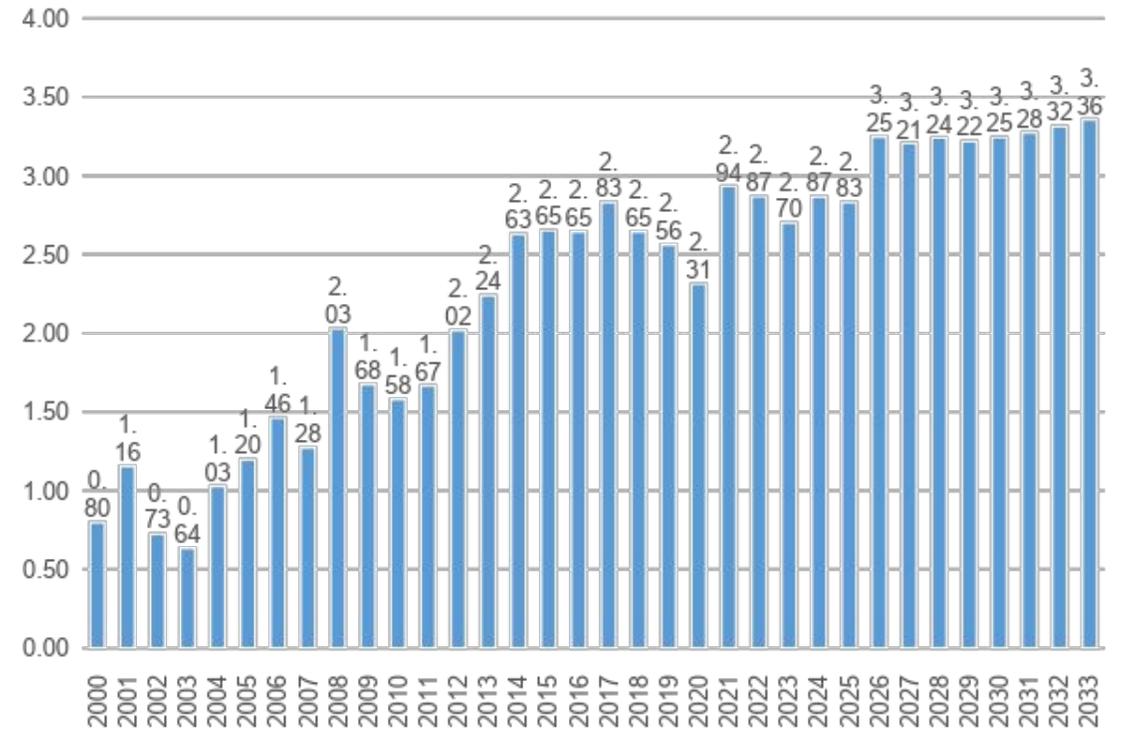
- Higher marginal returns for rapeseed compared to other oilseeds
- Rapeseed cultivation boosts soil fertility and benefits subsequent crops, making it a favorable choice in crop rotation, unlike sunflower seeds, which are more demanding to the soil.

# Rapeseed



■ Rapeseed, quantity produced, thsd t

Increase in yield and cultivation area boost rapeseed production.

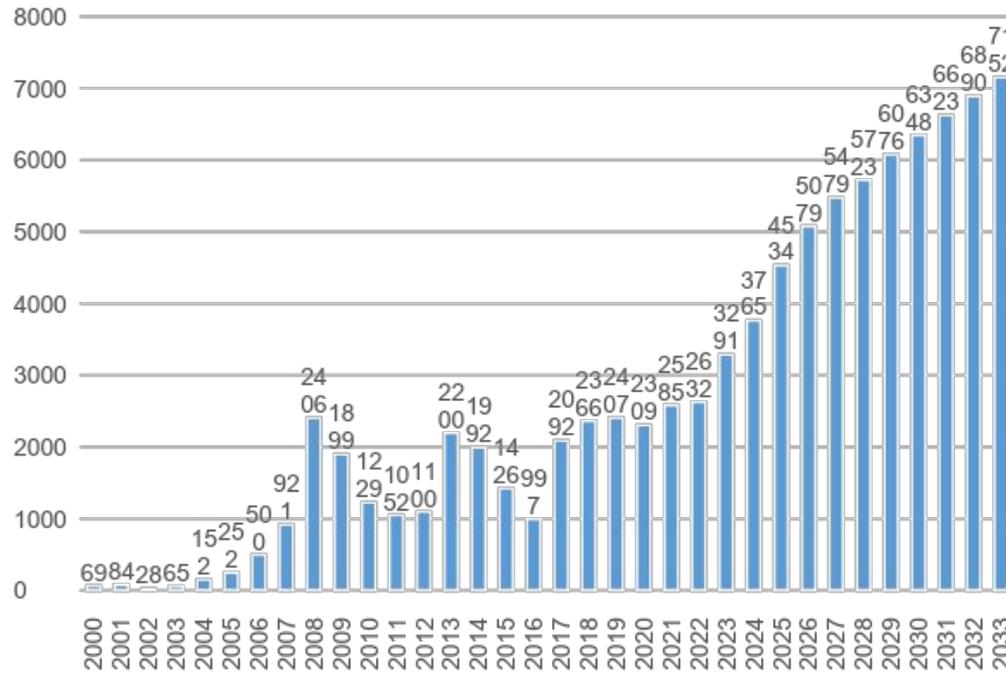


■ Rapeseed, yield, t/ha

Yield projected to continue its general upward trajectory.

\* t refers to metric ton

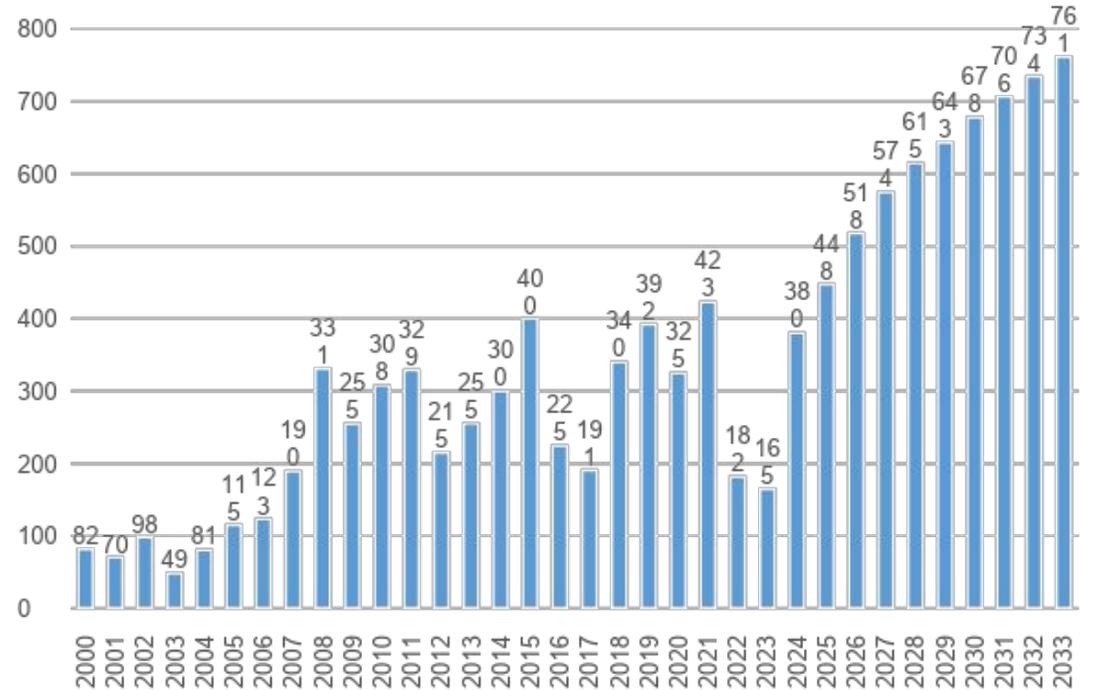
# Rapeseed



■ Rapeseed, quantity exported, thsd t

Exports are to increase due to higher production levels.

Imports remain below 40 thsd t per year.

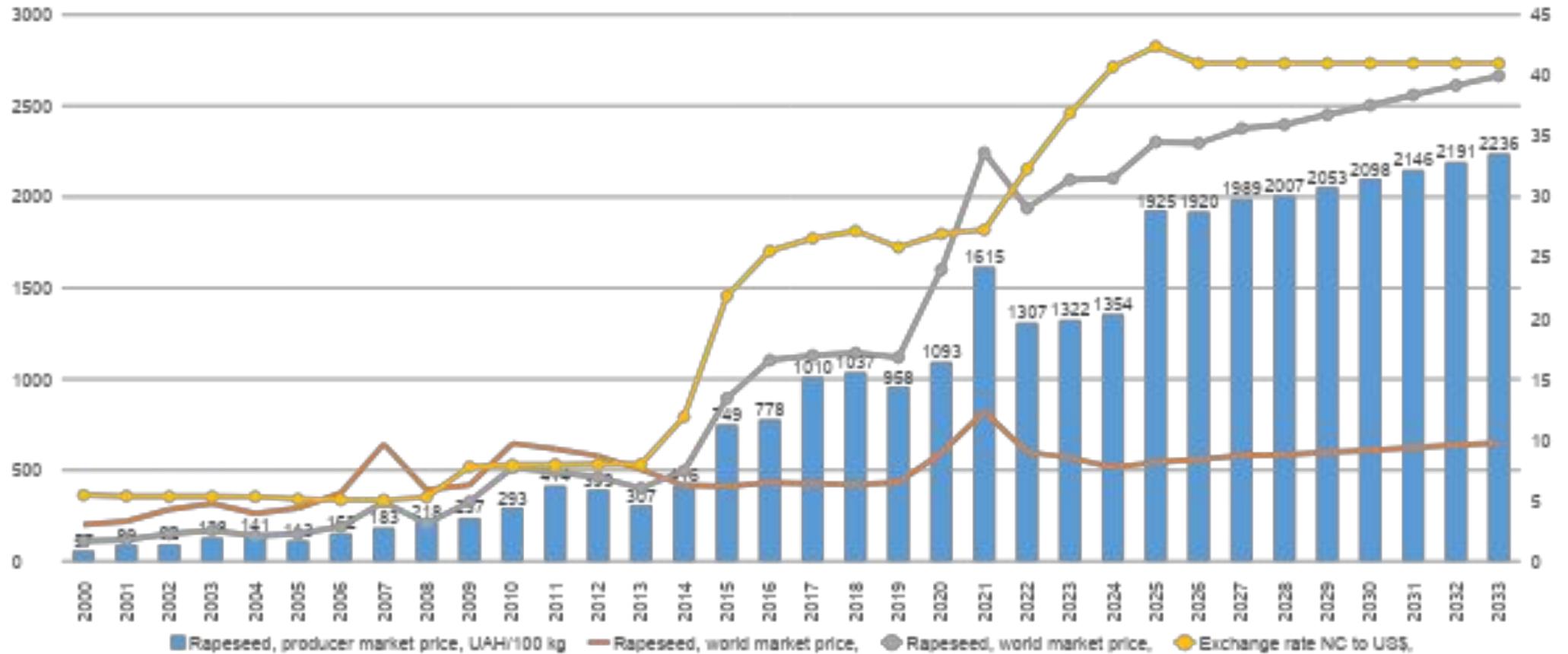


■ Rapeseed, total domestic use, thsd t

Domestic demand for rapeseed continues to grow, driven primarily by poultry sector growth and the respective demand for rapeseed meal.

\* t refers to metric ton

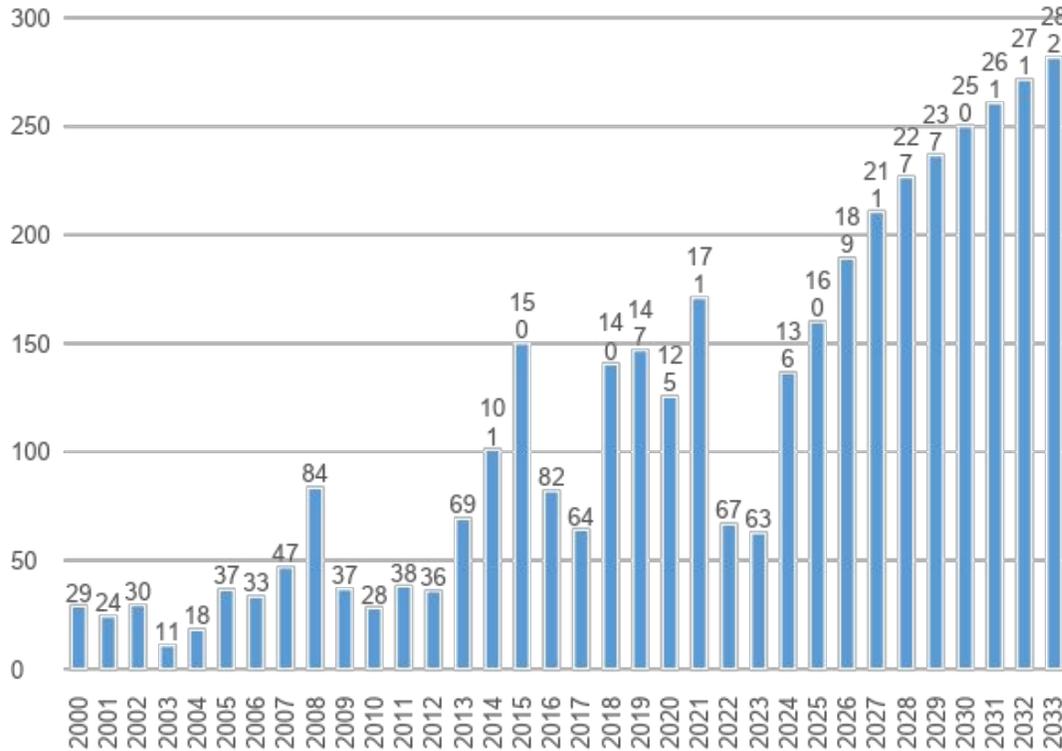
# Rapeseed



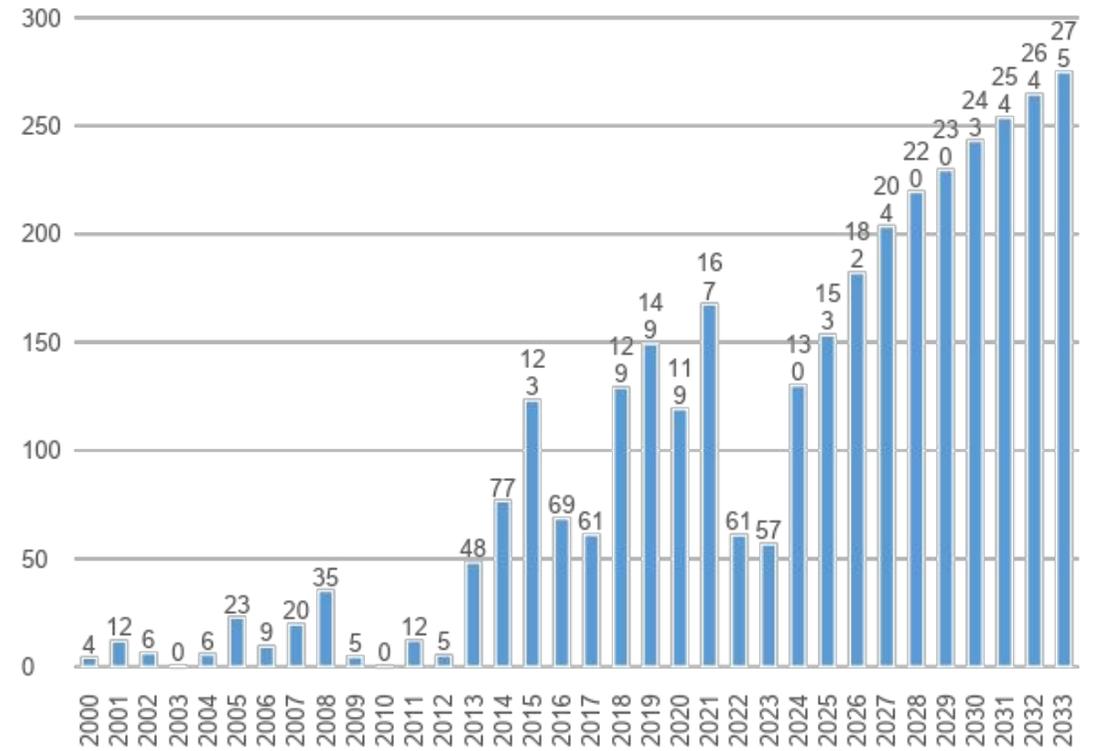
Domestic producer prices for rapeseed are expected to recover and align with the positive trend observed in world market prices.

\* t refers to metric ton

# Rapeseed oil



■ Rapeseed oil, quantity produced, thsd t



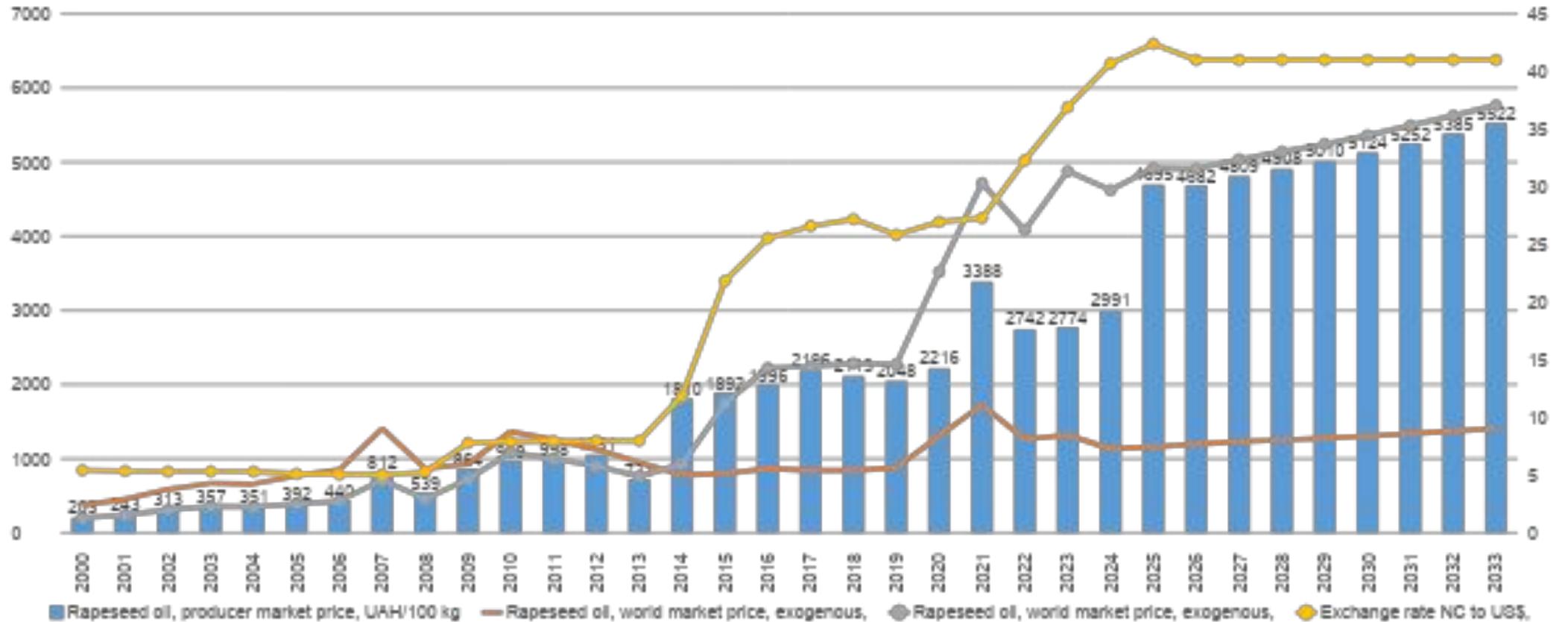
■ Rapeseed oil, quantity exported, thsd t

Projected increase in rapeseed oil production, fueled by greater area and yields.

Domestic consumption averaging 7 thousand tonnes, mostly for food (>90%) and biodiesel (~7%).

\* t refers to metric ton

# Rapeseed oil

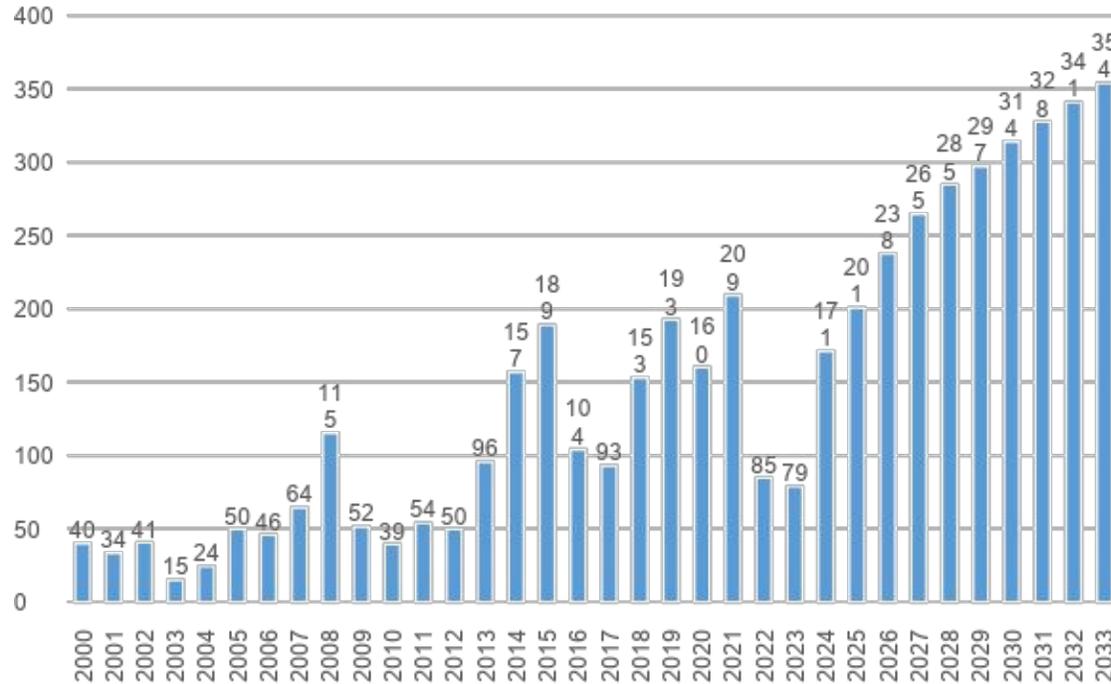


## Domestic prices Including VAT

Producer prices expected to rebound and synchronize with positive trend of global market prices.

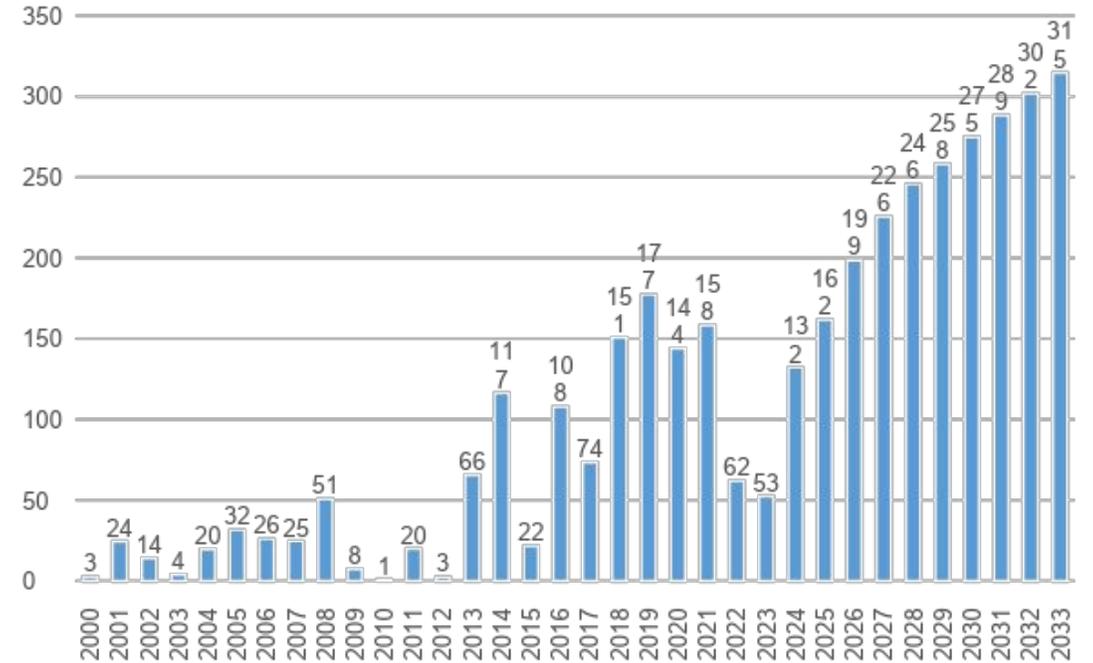
\* t refers to metric ton

# Rapeseed meal



■ Rapeseed meal, quantity produced, thsd t

Increase expected, in line with more rapeseed production due to larger cultivation areas and better yields.



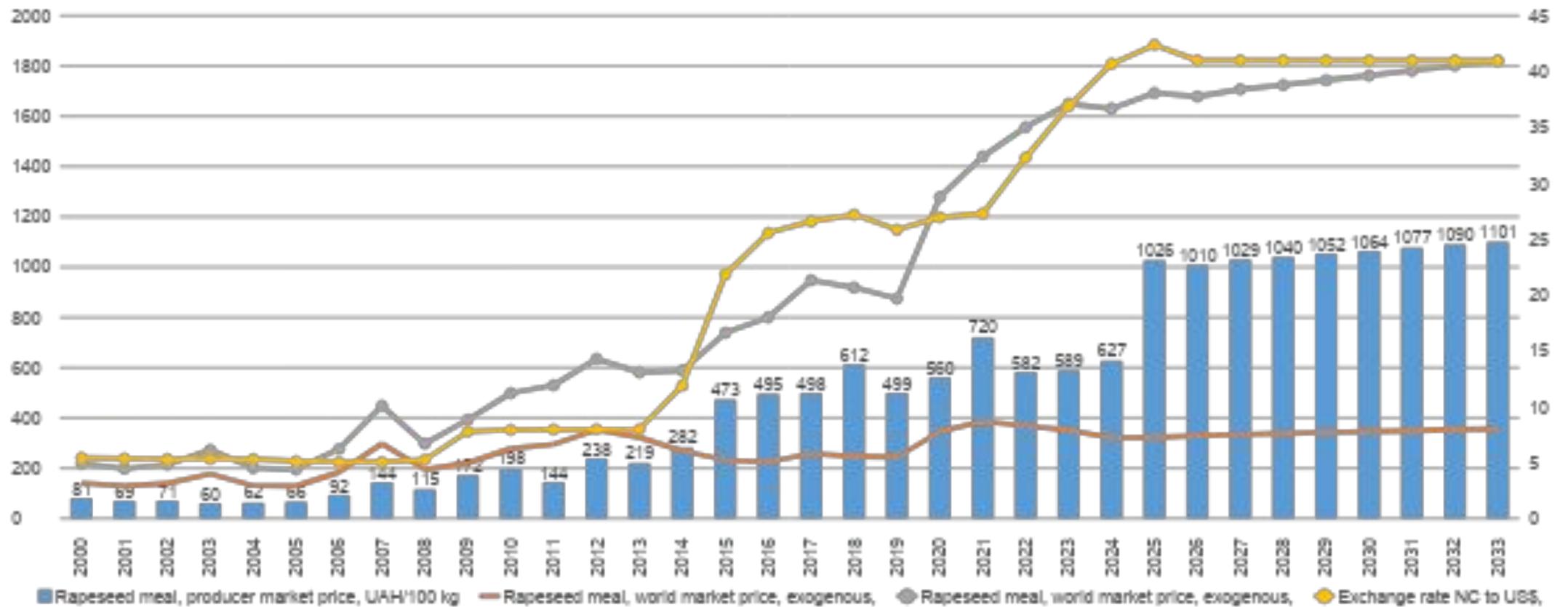
■ Rapeseed meal, quantity exported, thsd t

Exports will experience a significant increase from 2024 onwards, fueled by the surplus production.

Imports will remain low.

\* t refers to metric ton

# Rapeseed meal



## Domestic prices Including VAT

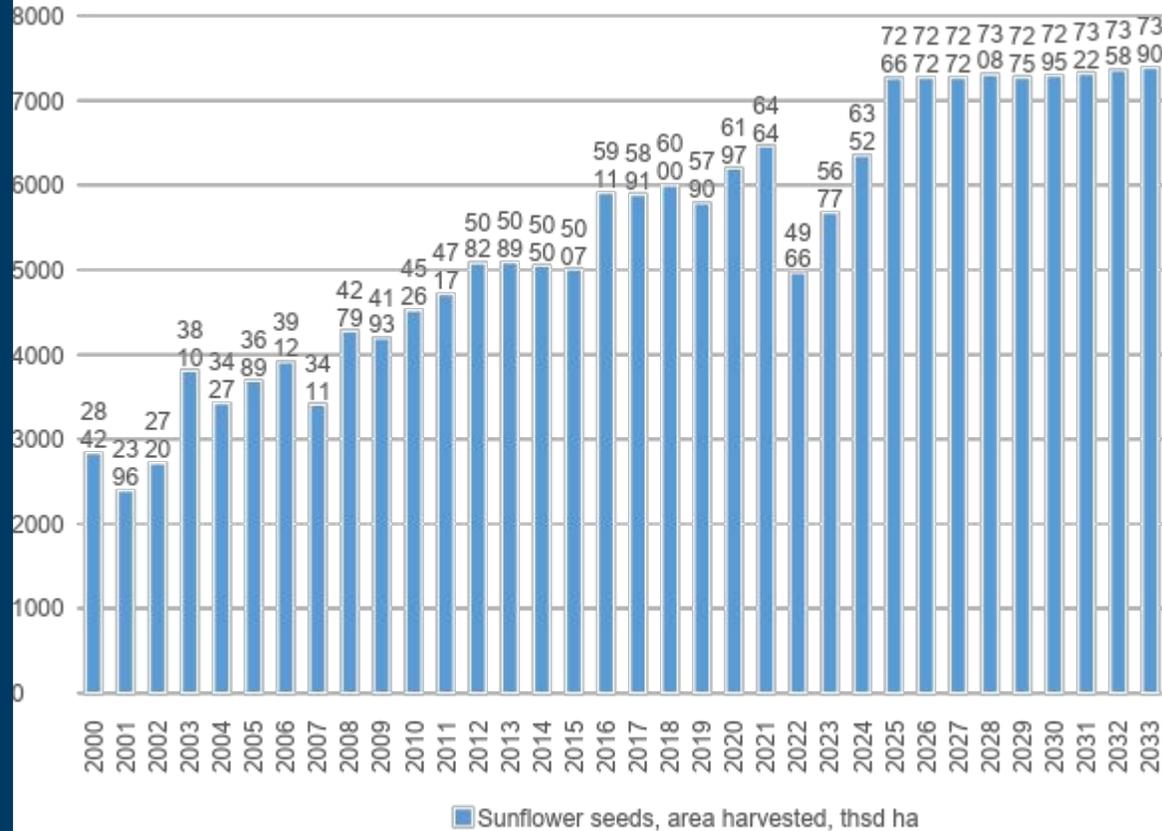
The UAH devaluation and slow logistics capacity recovery will prevent from return of the basis to the 2021 level.

\* t refers to metric ton

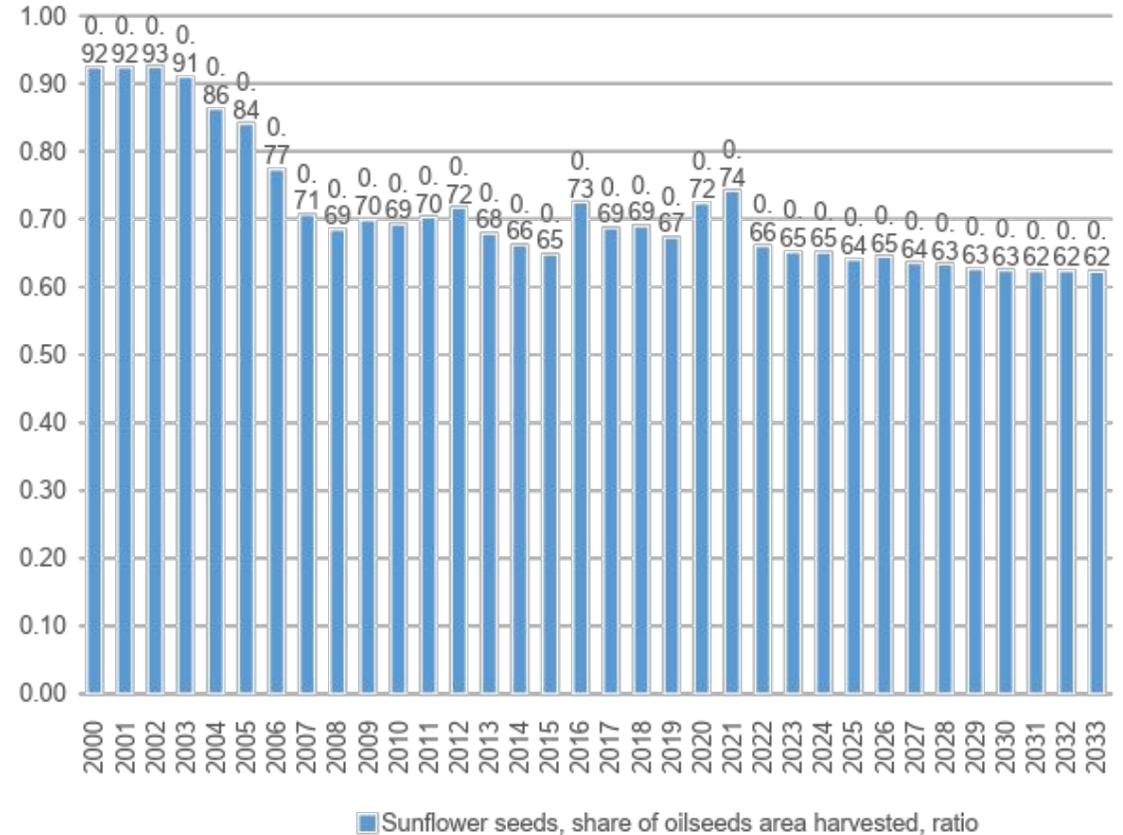
# Sunflower seeds and its derivatives

- Sunflower seed cultivation has been rising for decades, positioning Ukraine as the world's leading exporter of sunflower oil, accounting for around 50% of global exports.
- The area dedicated to sunflower seeds is expected to continue to grow, supported by existing infrastructure and high profitability. However, this growth will be more moderate compared to rapeseed, due to the soil-exhausting nature of sunflower cultivation and lower gross margins.
- Sunflower seeds are projected to remain the dominant oilseed crop, with their share among all oilseeds slightly reducing from 65% to 62% by 2033. This will represent over 7 million hectares.

# Sunflower seeds

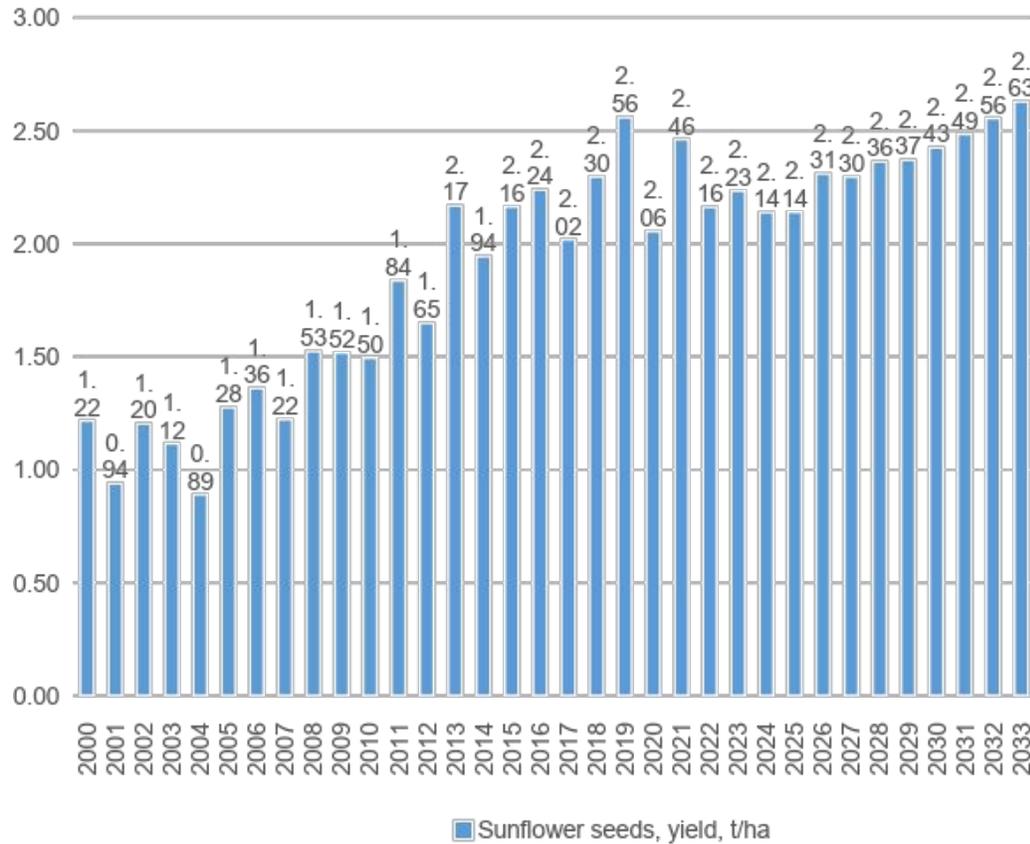


Sunflower seeds' harvested area to see a modest positive trend, benefiting from the general shift from grain to oilseed cultivation.

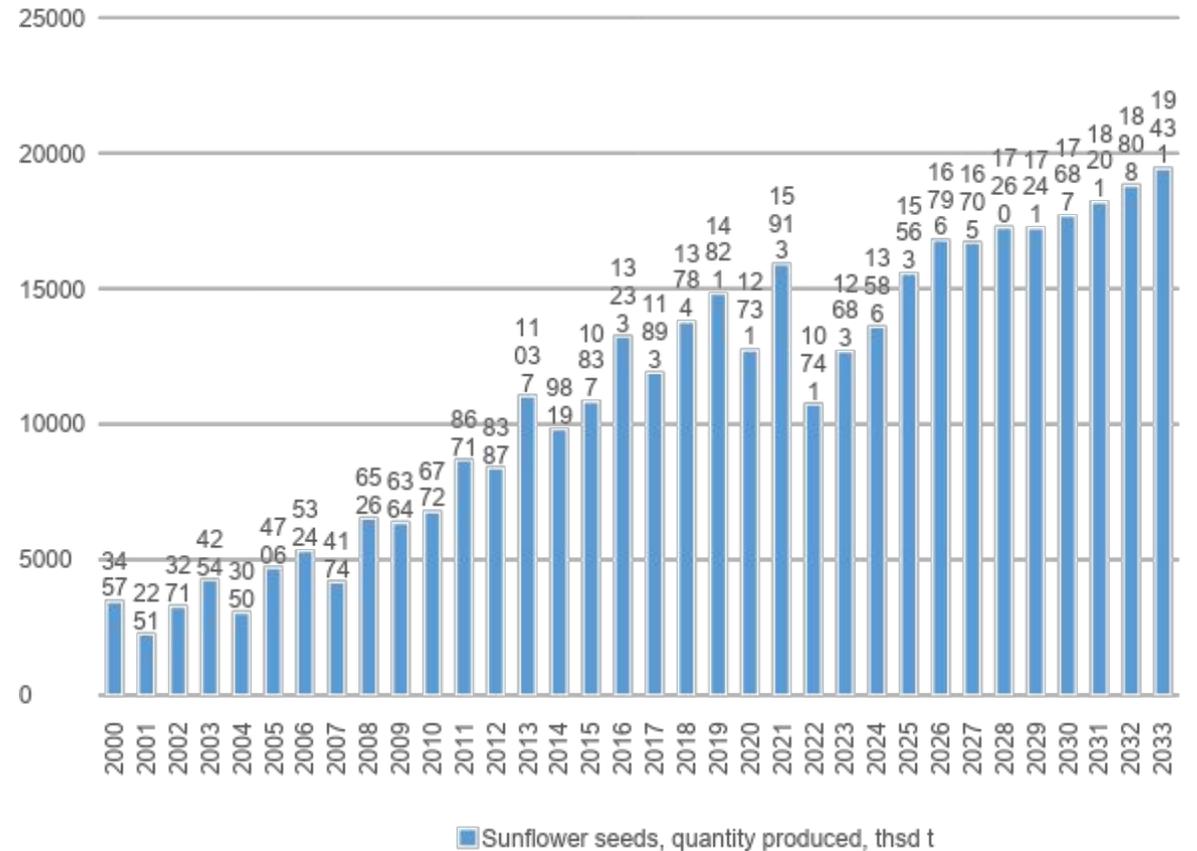


The sunflower seed's share in the oilseed sector is projected to decrease, impacted by rapeseed's growing area.

# Sunflower seeds



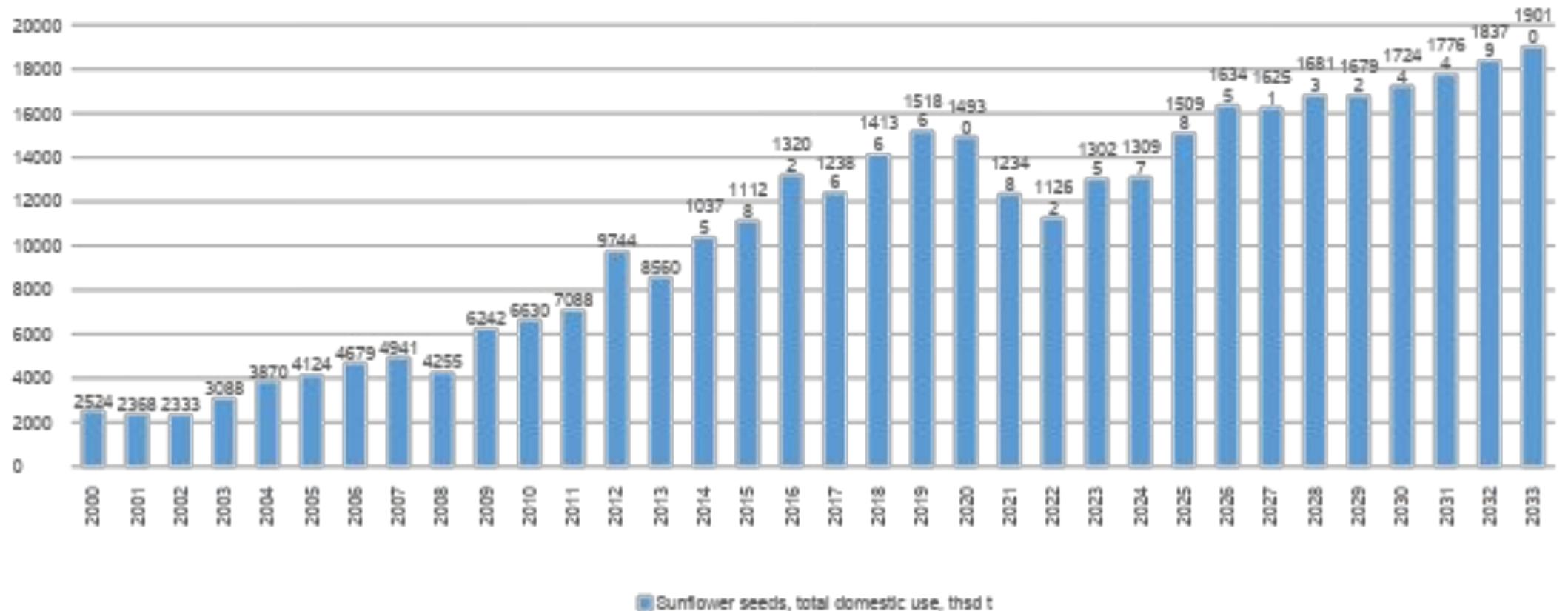
Sunflower seed yields expected to rise, in line with the overall positive trend.



Production boost is due to both expanded cultivation and improved yields.

\* t refers to metric ton

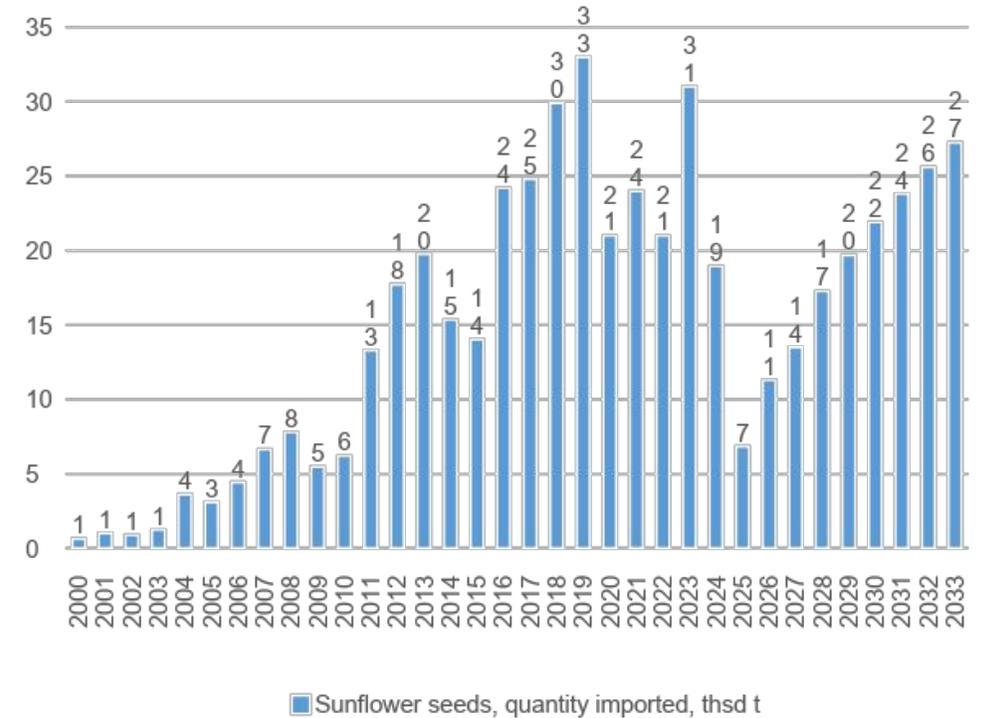
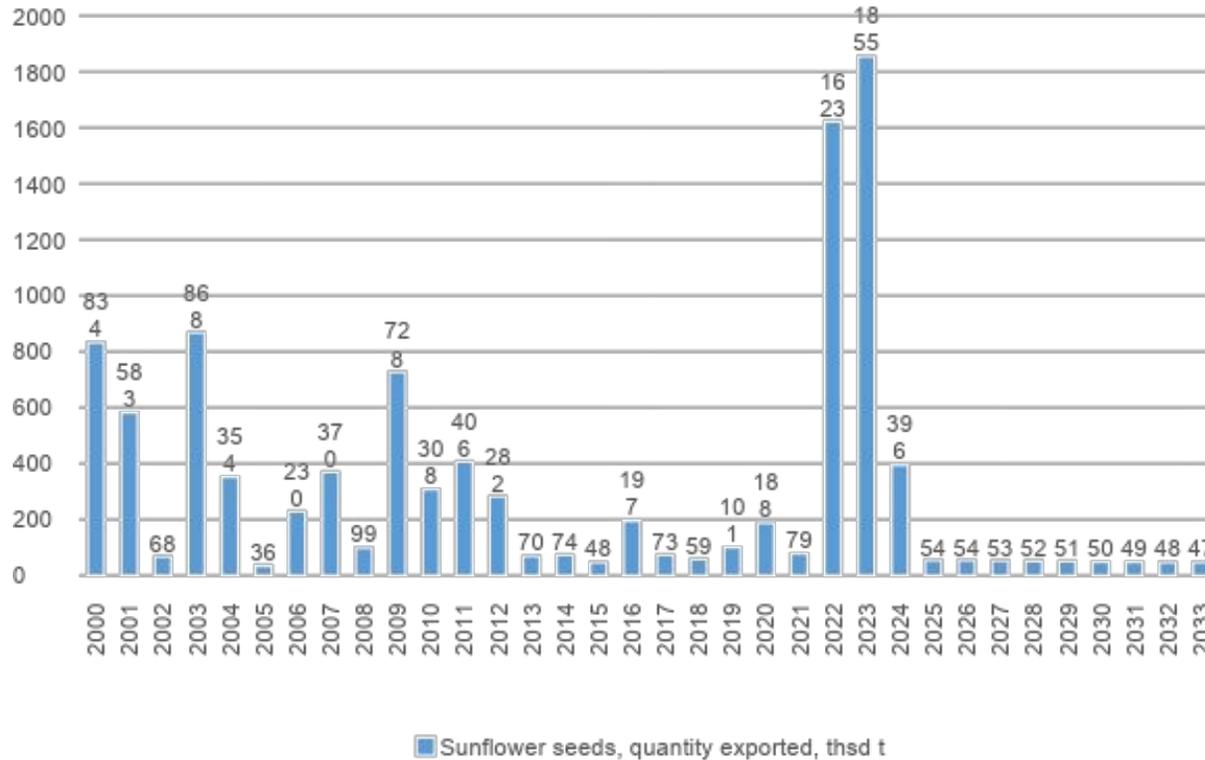
# Sunflower seeds



Projected increase in sunflower seed domestic use, driven by growth in seed crushing for oil production.

\* t refers to metric ton

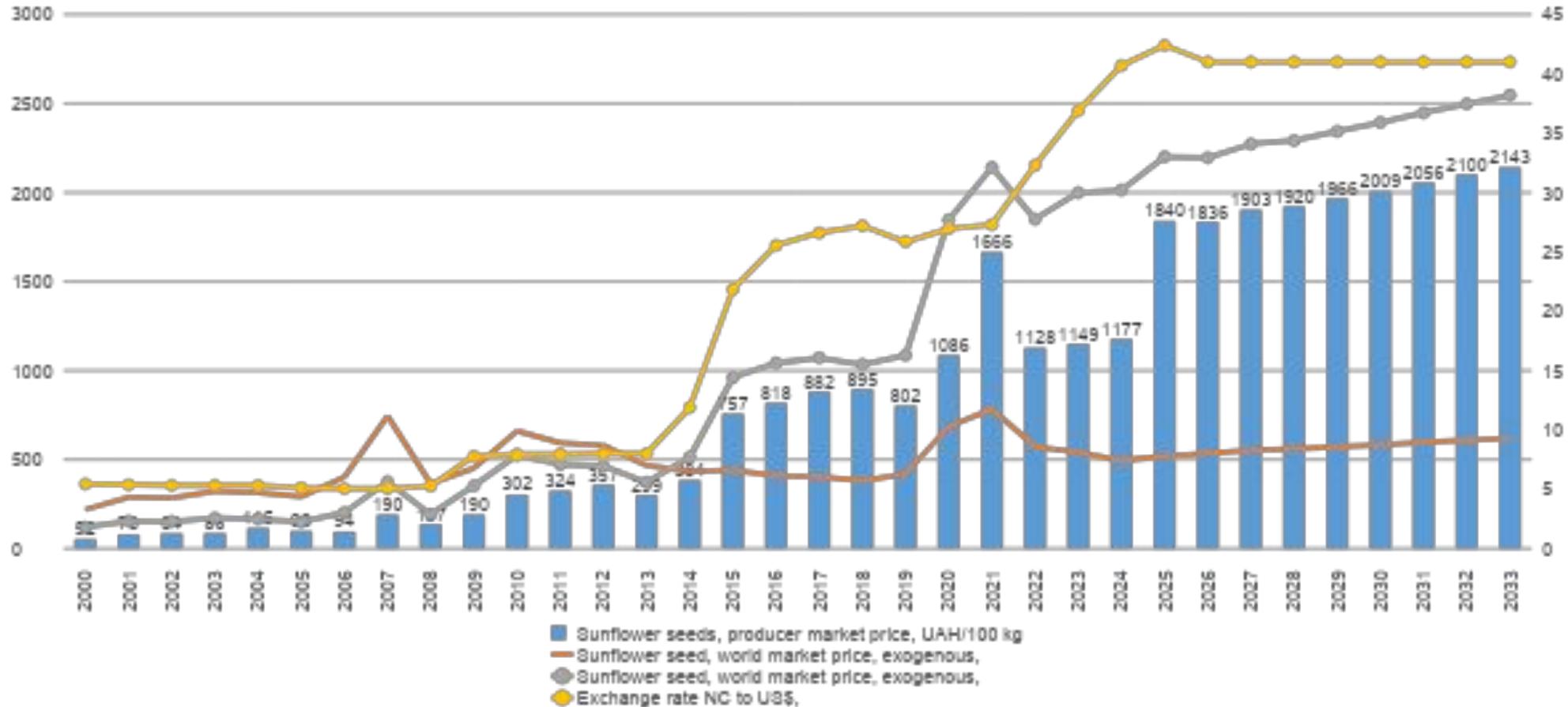
# Sunflower seeds



Exports will remain low and imports are projected to increase (the quantities, nevertheless, remaining very low) due to higher profitability of value-added products, such as oil and meal.

\* t refers to metric ton

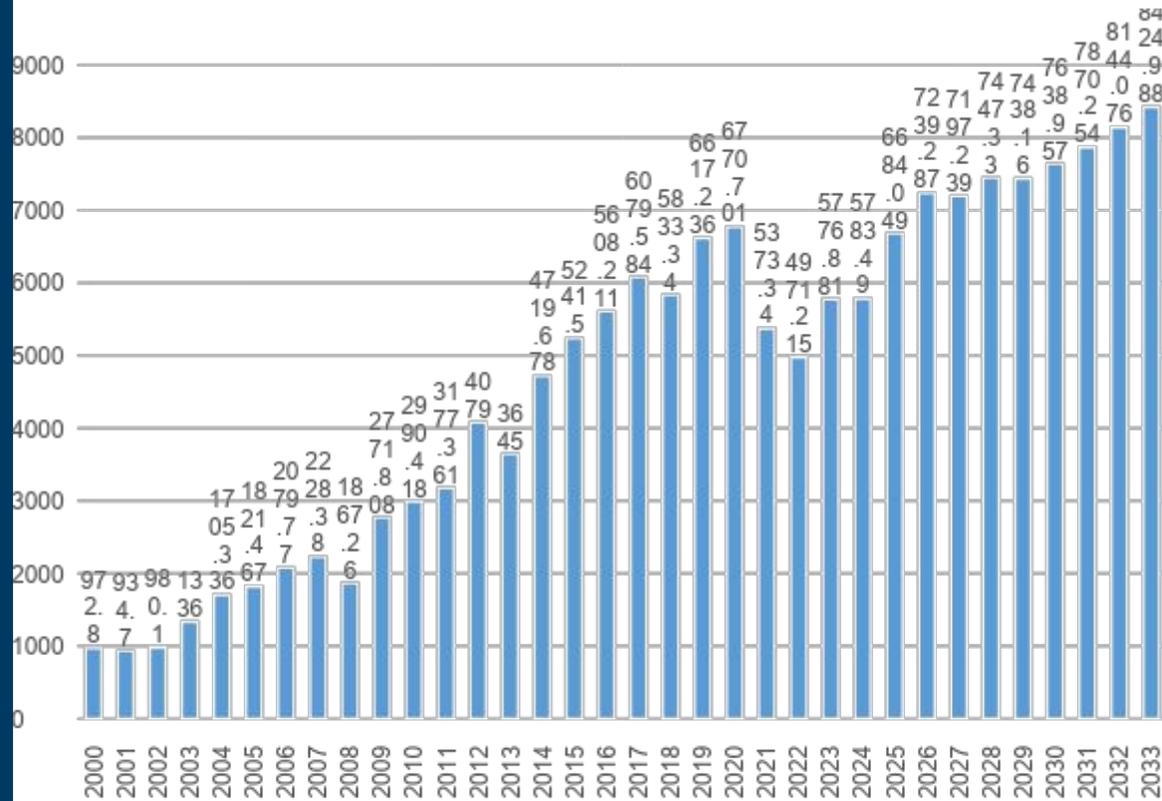
# Sunflower seeds



Domestic sunflower seed prices also projected to have a positive trend. The UAH devaluation and slow logistics capacity recovery will prevent from return of the basis to the 2021 level.

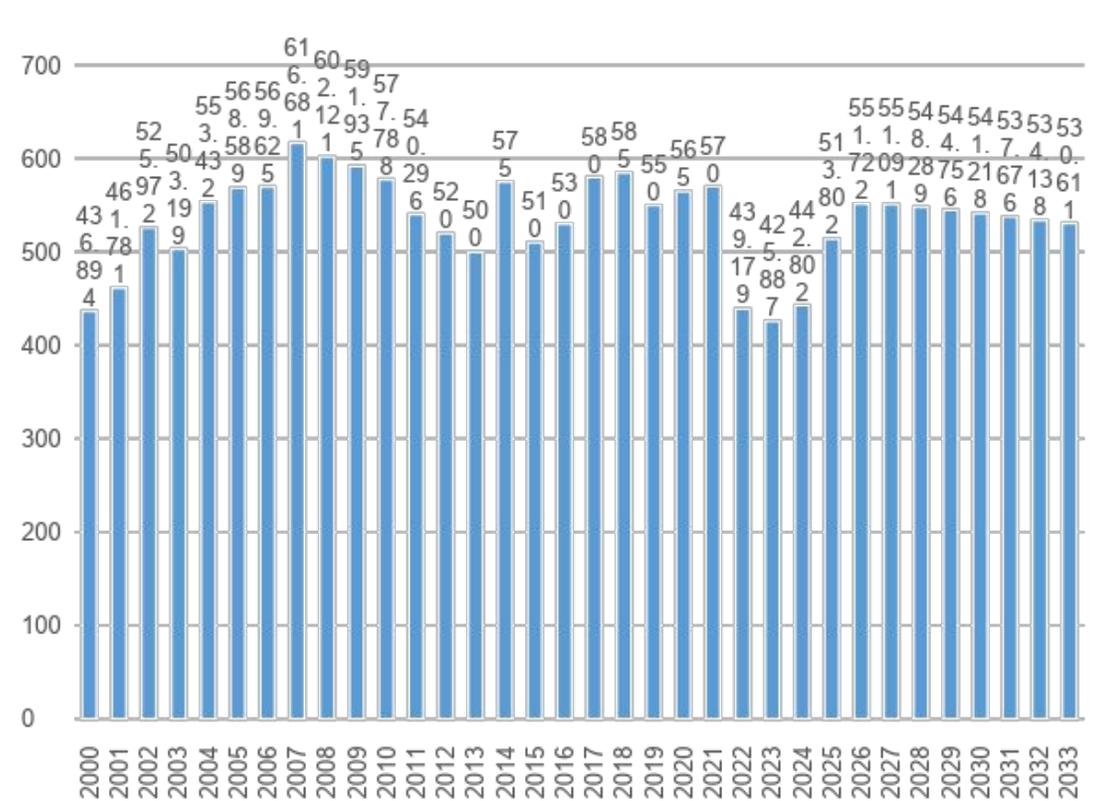
\* t refers to metric ton

# Sunflower oil



■ Sunflower oil, quantity produced, thsd t

Production is expected to resume its growth from 2025 onwards due to increase in sunflower seed production.

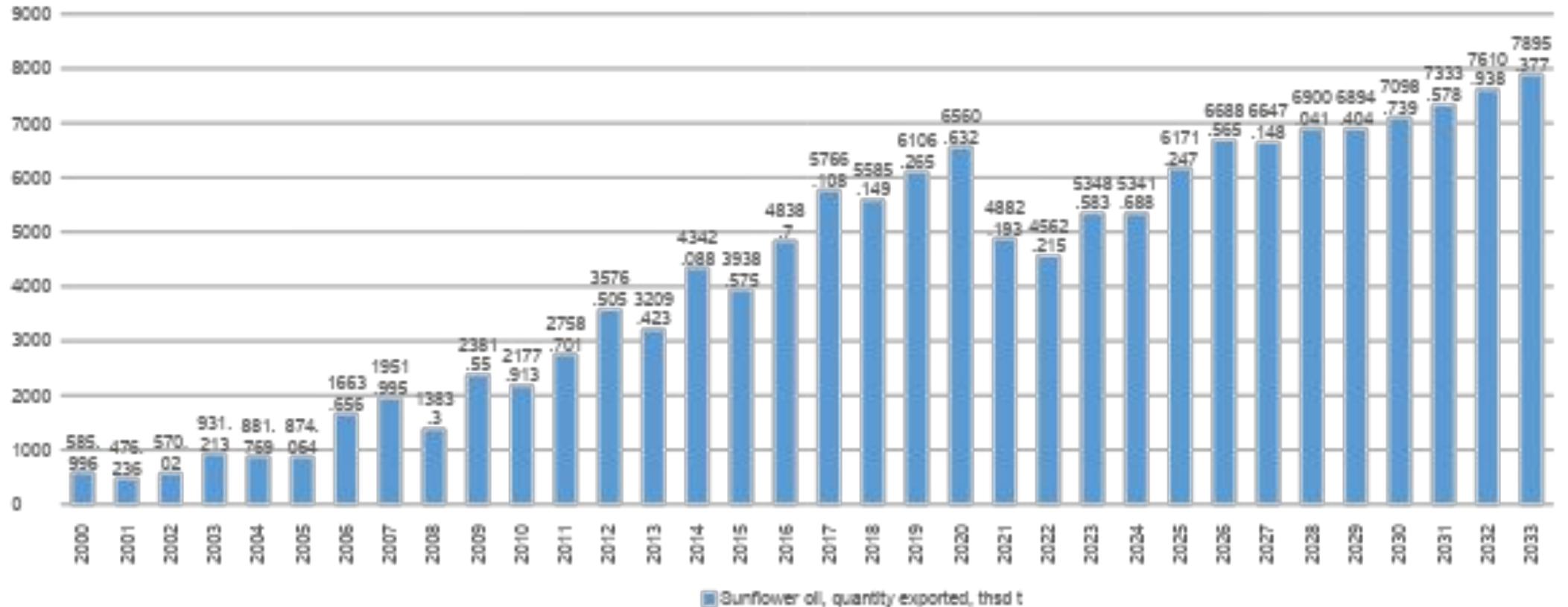


■ Sunflower oil, total domestic use, thsd t

Moderate downward trend in overall consumption is anticipated due to a decrease in the population, despite per capita consumption remaining stable.

\* t refers to metric ton

# Sunflower oil

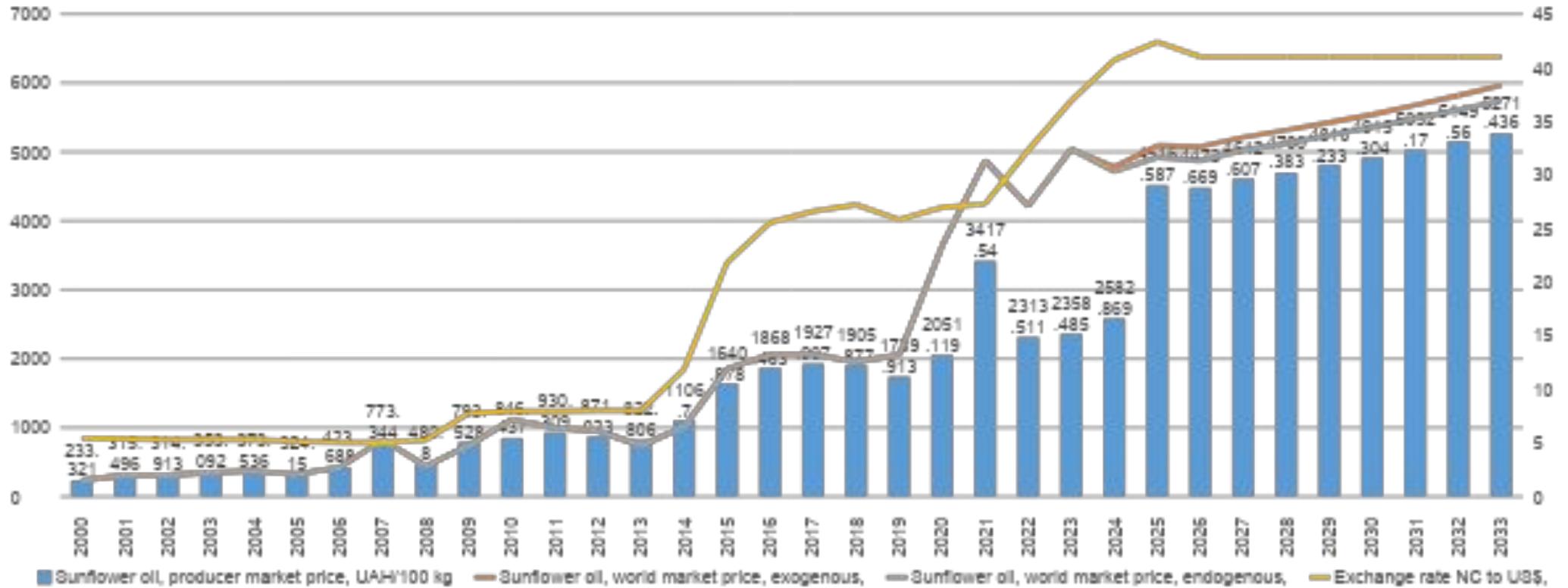


Since 2011, the quantity of sunflower oil imported has been below 1 thsd tonnes per year.

Growth in sunflower oil exports anticipated, following an increase in production incentivized by the high profitability of sunflower oil.

\* t refers to metric ton

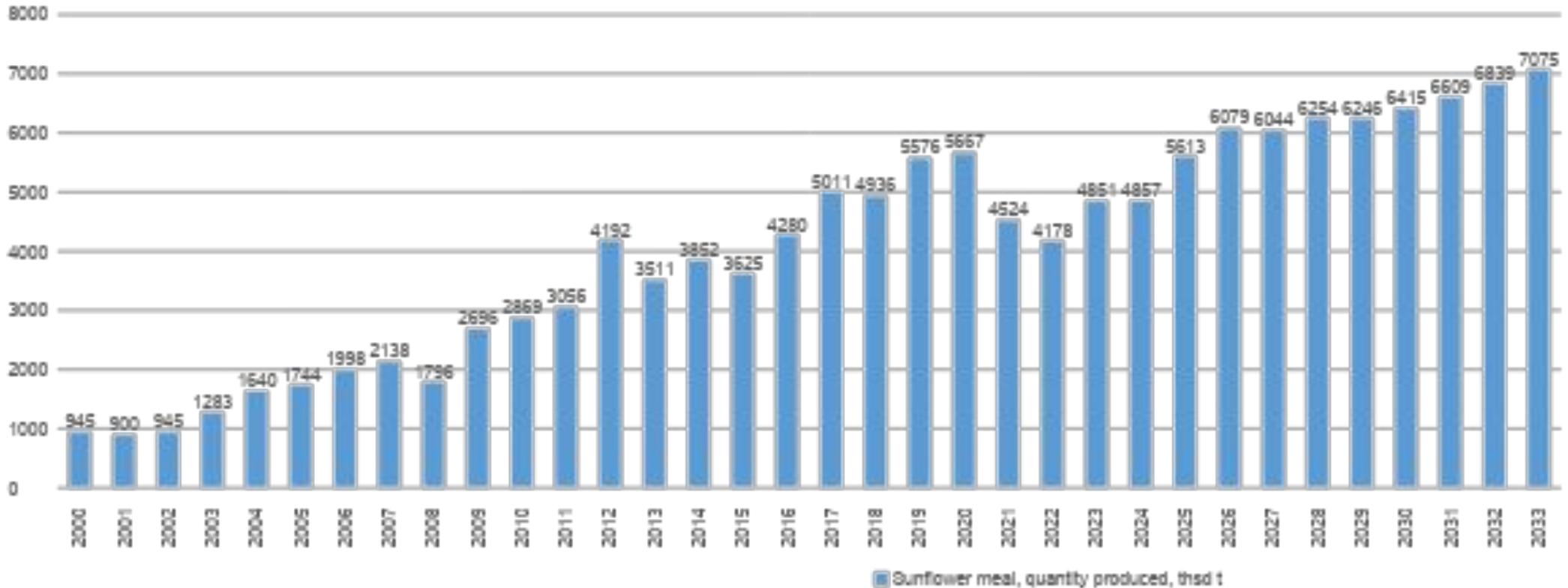
# Sunflower oil



Domestic prices Including VAT

Ukrainian production not only responds to world prices but also influences them.

# Sunflower meal

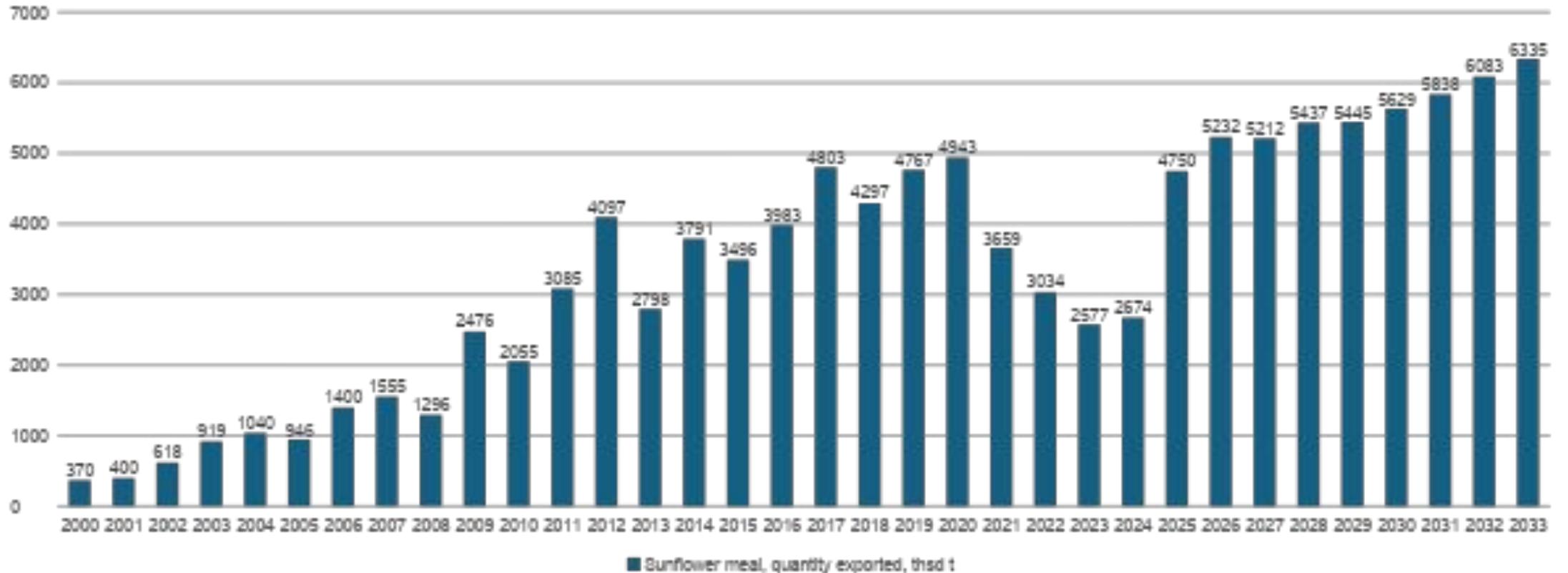


Sunflower meal production is expected to rise, as a result of sunflower oil production process generating meal as a byproduct.

Domestic consumption will decline.

\* t refers to metric ton

# Sunflower meal

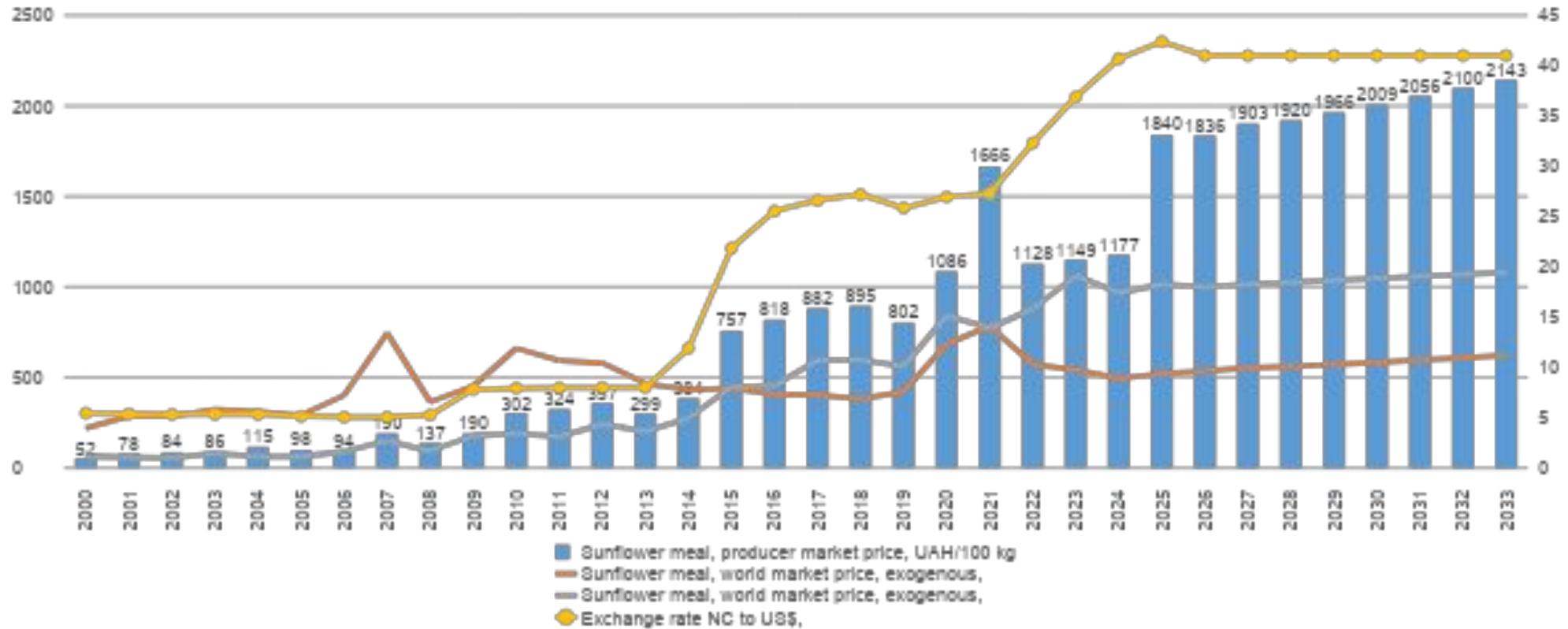


With production up and domestic consumption down, exports set to increase.

Imports to remain below 5 thsd tonnes.

\* t refers to metric ton

# Sunflower meal



## Domestic prices Including VAT

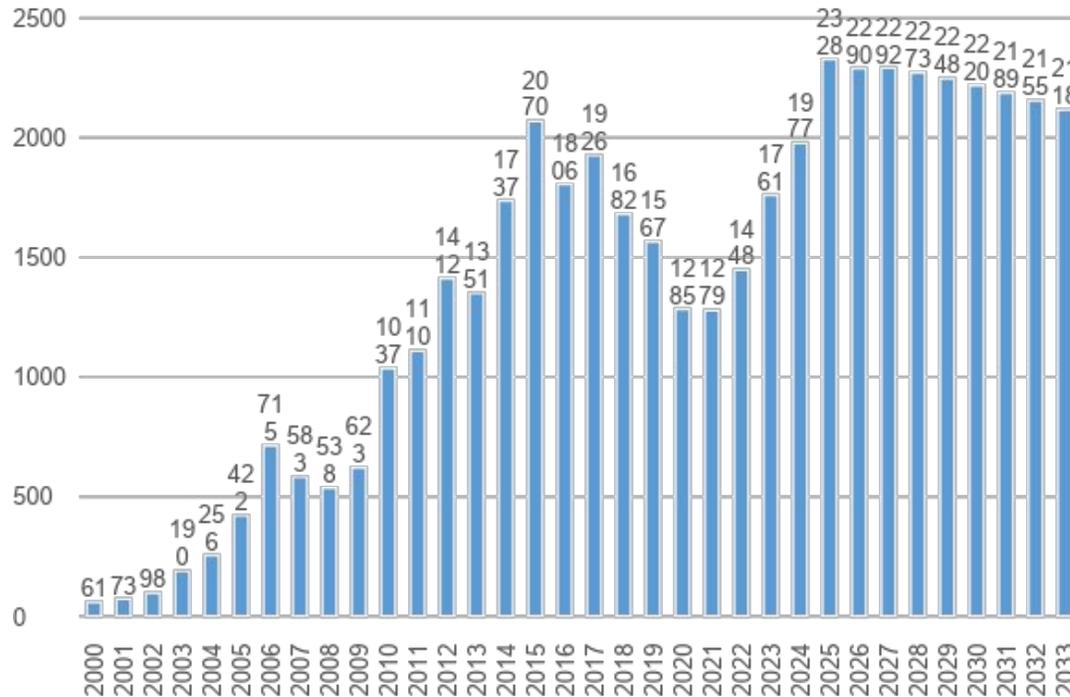
The domestic price for sunflower meal is set to increase, influenced by the projected rise in global sunflower meal prices. The UAH devaluation and slow logistics capacity recovery will prevent from return of the basis to the 2021 level.

\* t refers to metric ton

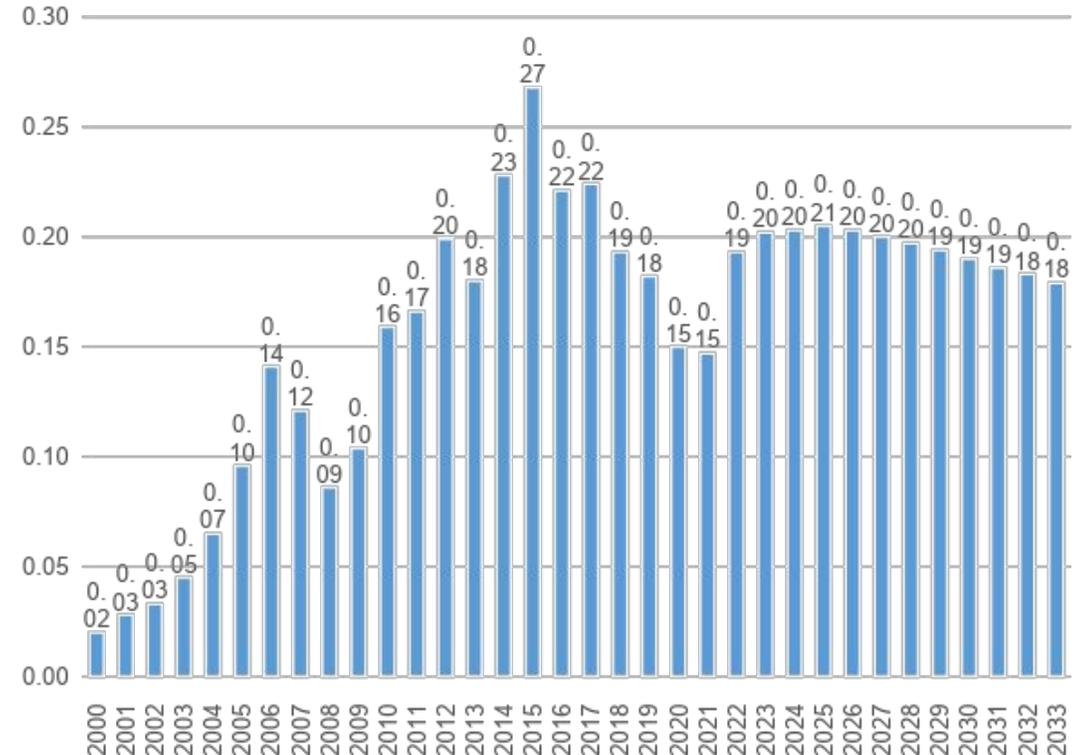
# Soya beans and its derivatives

- Soybean area and production have increased over the last five years, rebounding from a decline after 2018.
- Expected to reach a post-war peak due to reclaimed territories, then enter a moderate decline as competition from other oilseeds intensifies.
- Soybeans are positive for soil and crop rotation but projected to have much lower area expansion than rapeseed, owing to lower marginal returns.

# Soya beans



■ Soya beans, area harvested, thsd ha

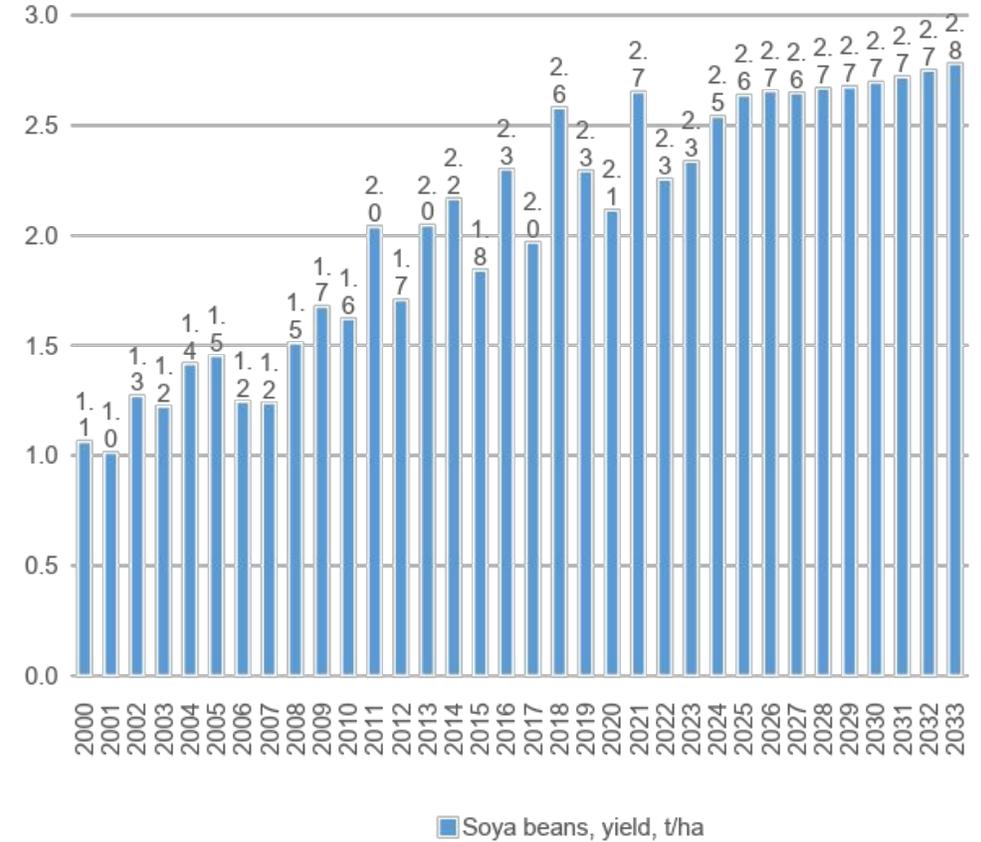
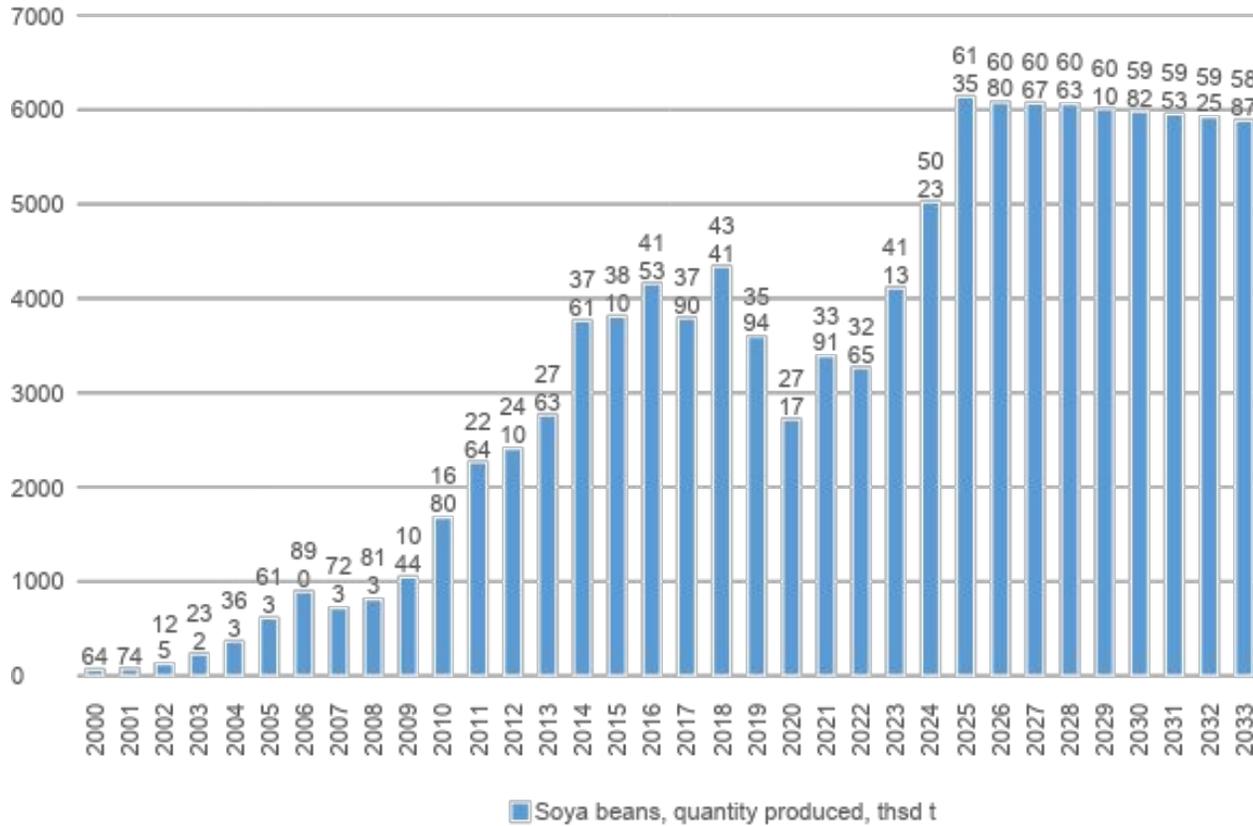


■ Soya beans, share of oilseeds area harvested, ratio

Soybean areas to rise post-war, followed by a decline influenced by a reduced share in the oilseeds area.

The decline in soybeans' share stems from competition with rapeseed that offer higher returns per land unit.

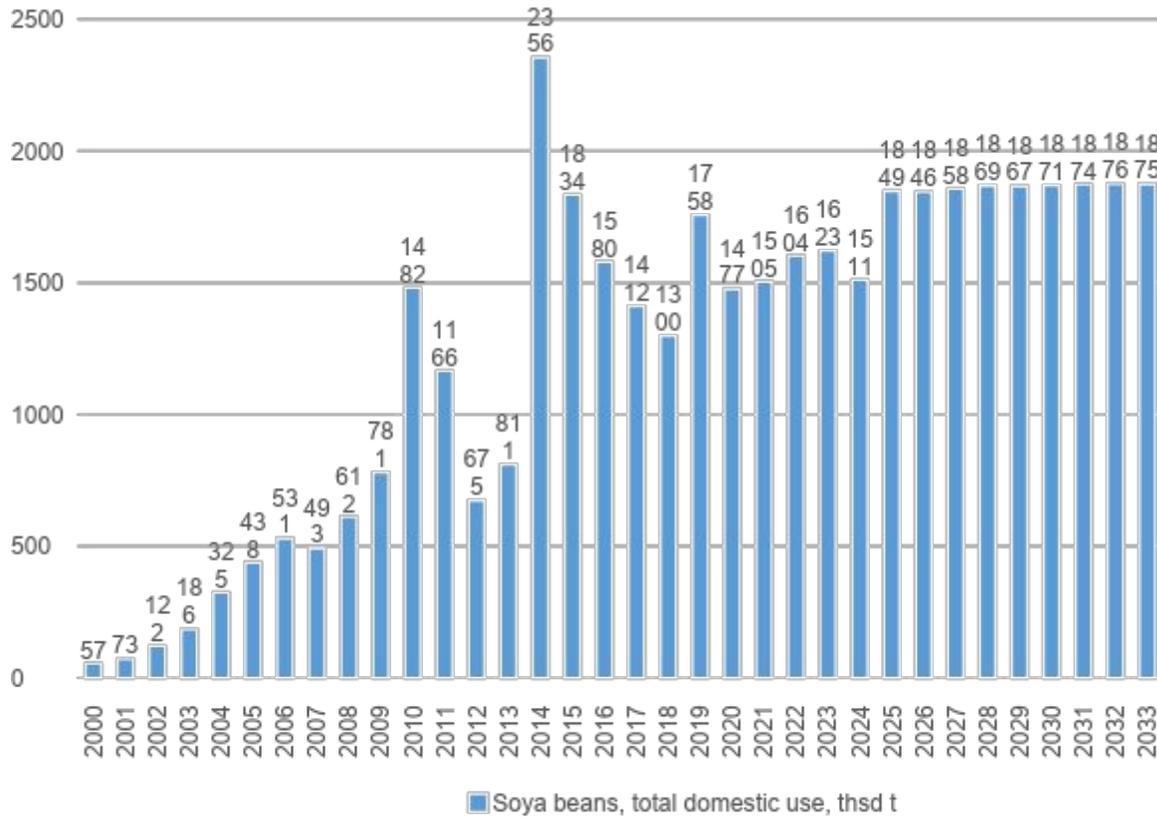
# Soya beans



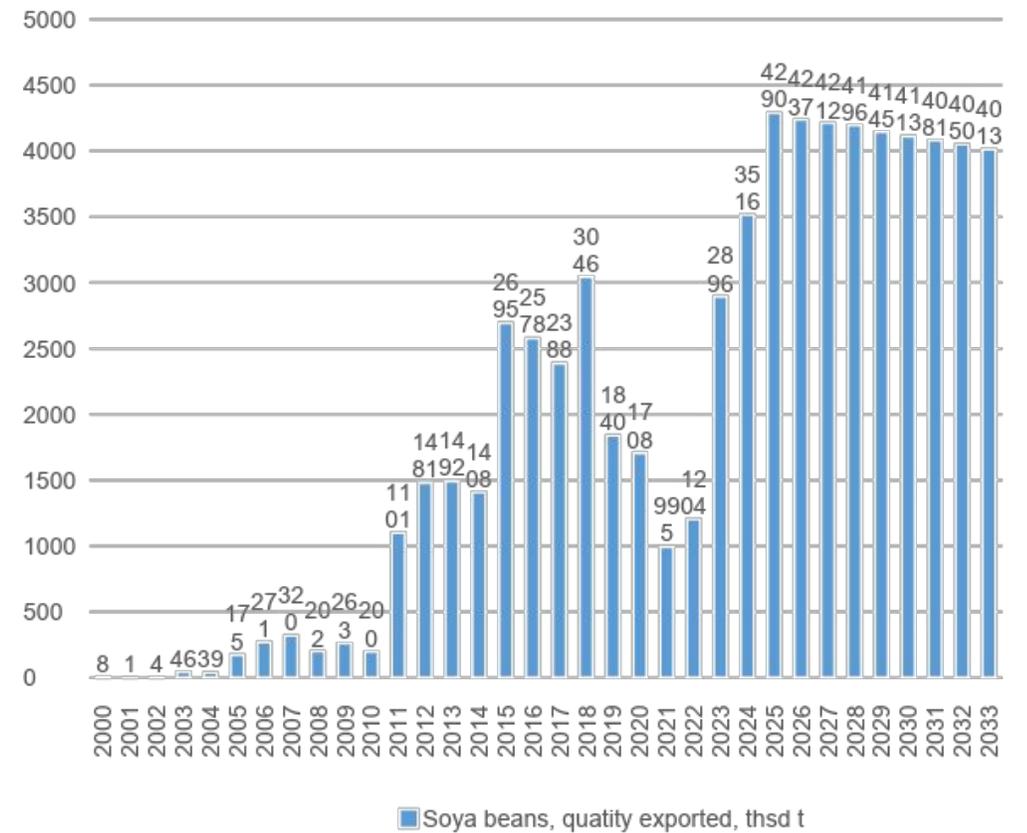
The quantity of soybeans produced is expected to grow and then slightly decline, thanks to improvements in yield.

\* t refers to metric ton

# Soya beans



Moderate upward trend is driven by growing demand for feed for the poultry industry.

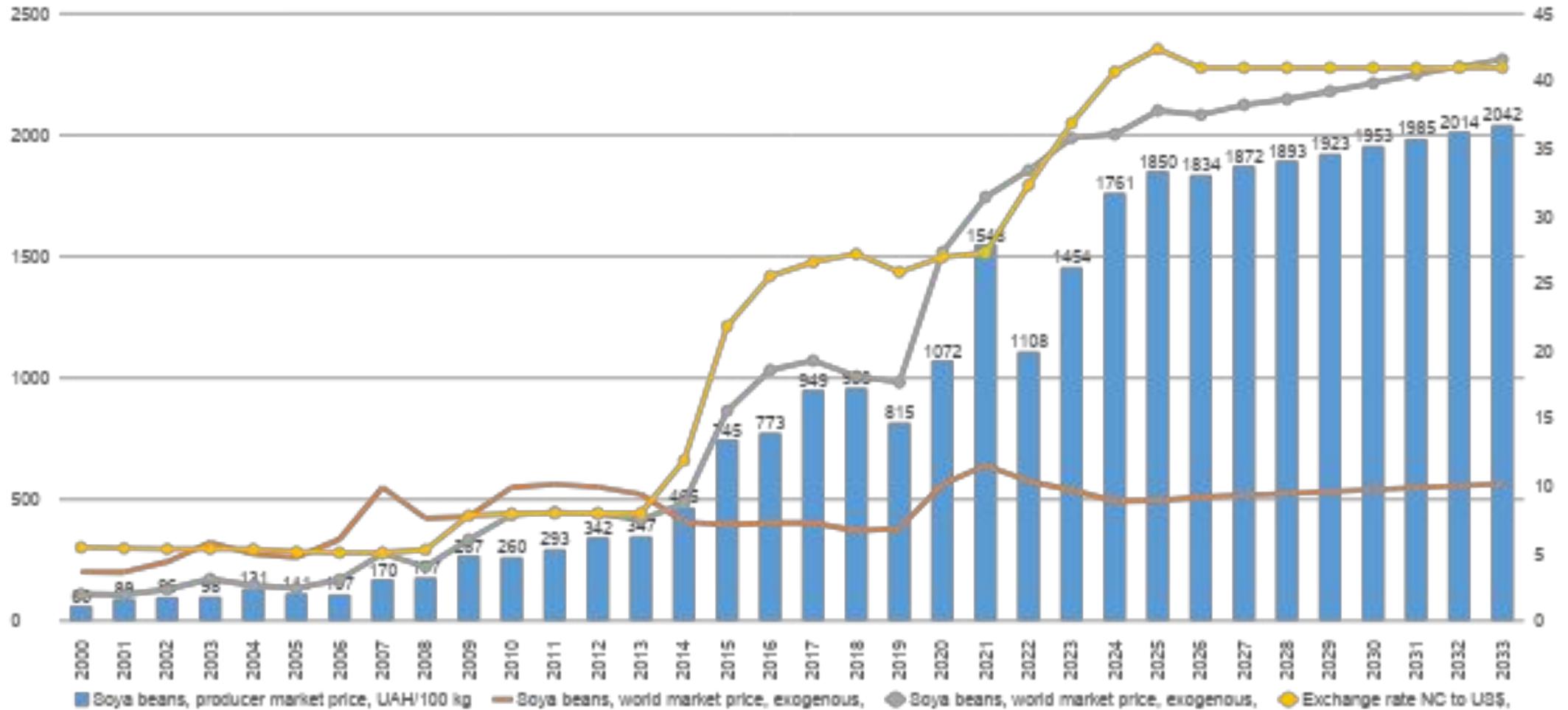


Exports are reflective of production with downward trend.

Imports are expected to remain below 4 thsd tonnes per year.

\* t refers to metric ton

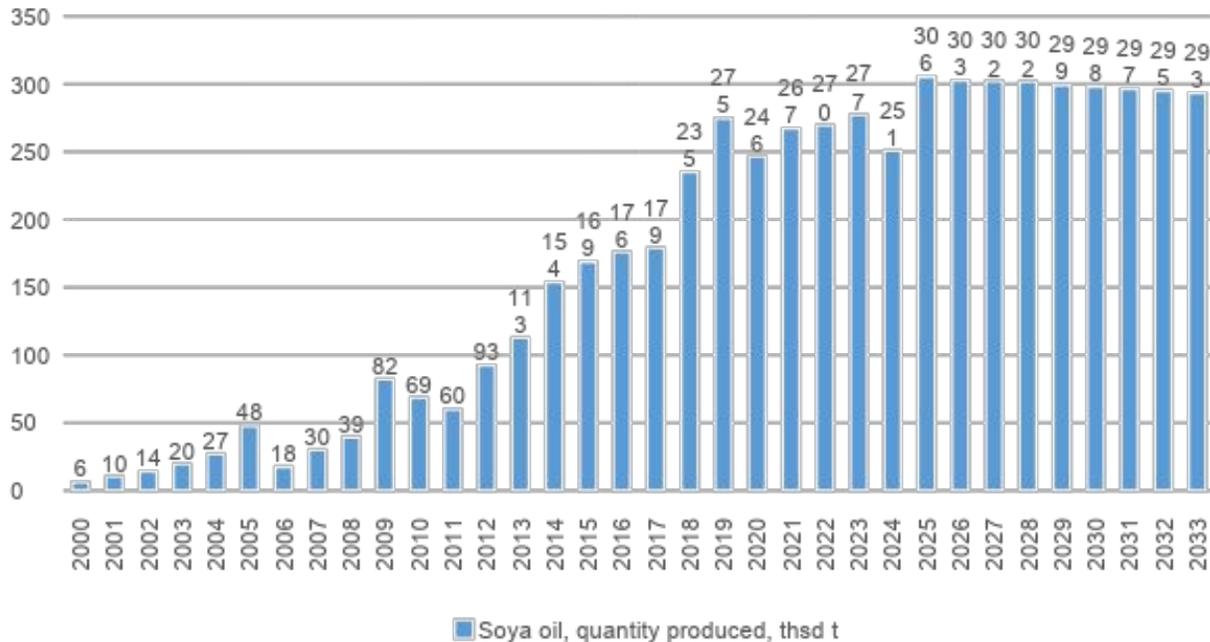
# Soya beans



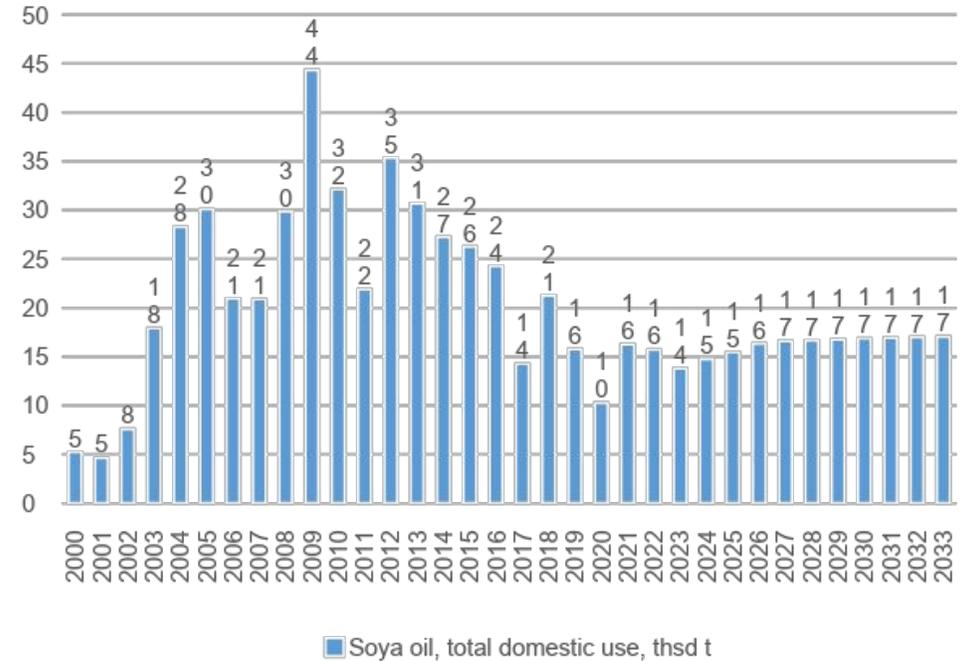
Domestic price of soybeans are also projected to rise in response to increasing world prices. The UAH devaluation and slow logistics capacity recovery will prevent from return of the basis to the 2021 level.

\* t refers to metric ton

# Soy oil

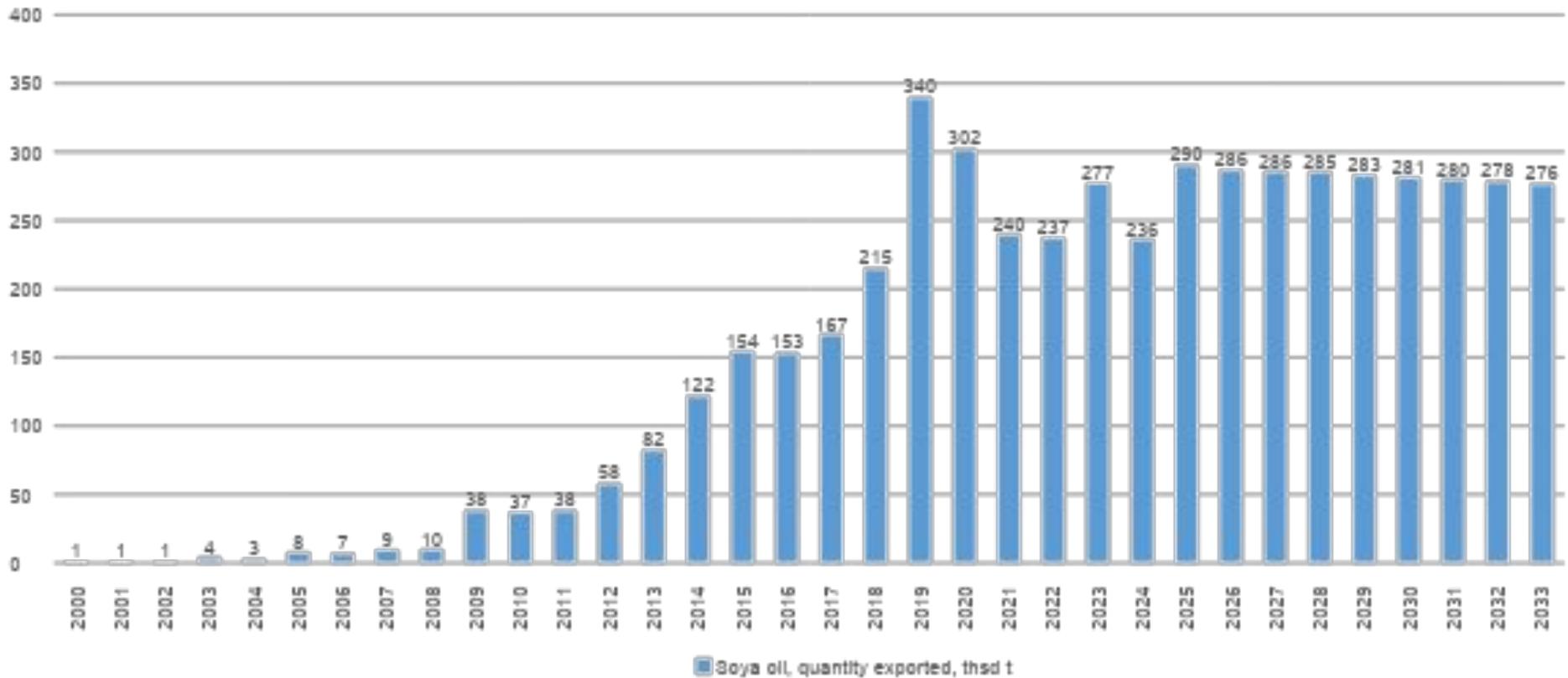


Set to rise in 2025, mirroring soybean production trends.



Food consumption of soy oil to moderately increase, influenced by population growth and GDP per capita.

# Soy oil

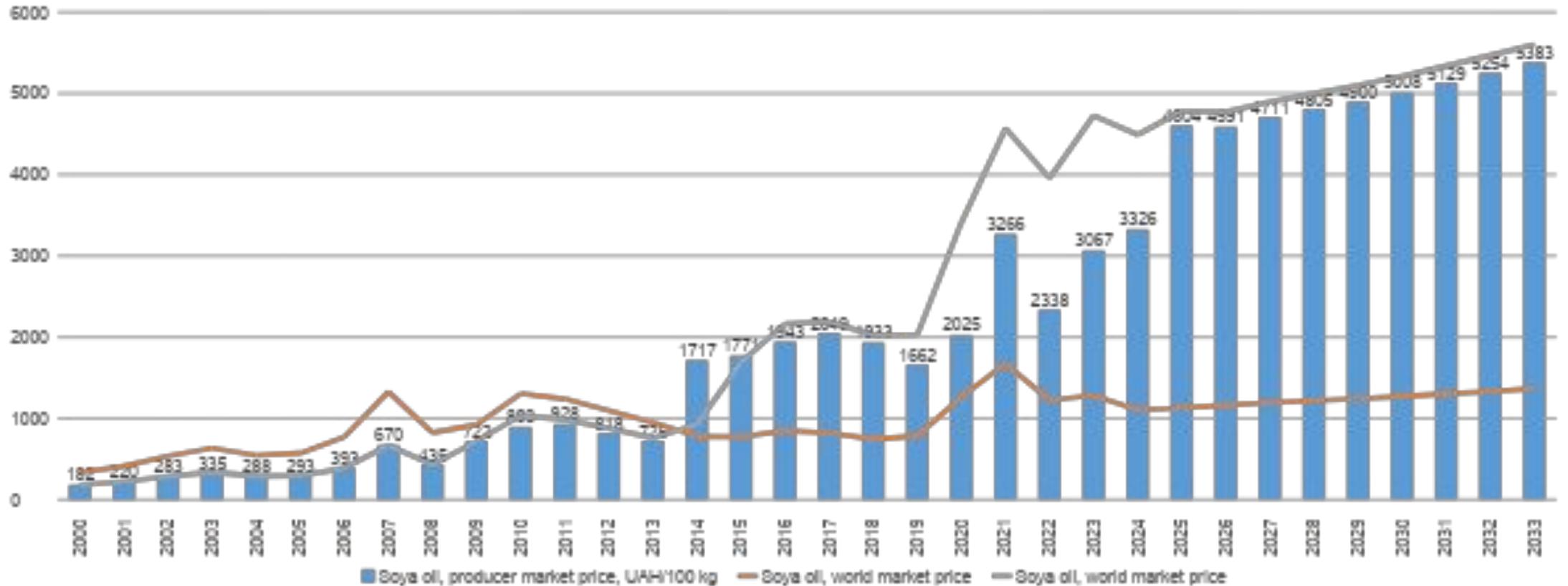


Recovery expected in soy oil exports for 2025 after 2024's decline, followed by gradual yearly reductions due to lower production levels.

Imports will continue to be below 1 thsd tonne.

\* t refers to metric ton

# Soy oil

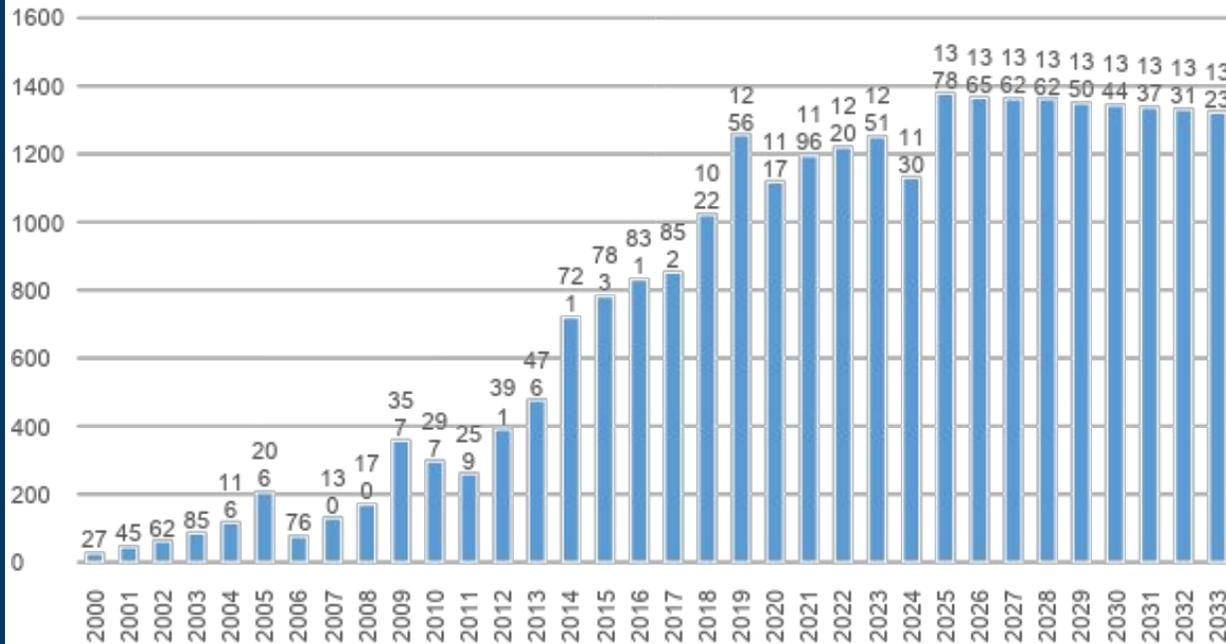


Domestic prices Including VAT

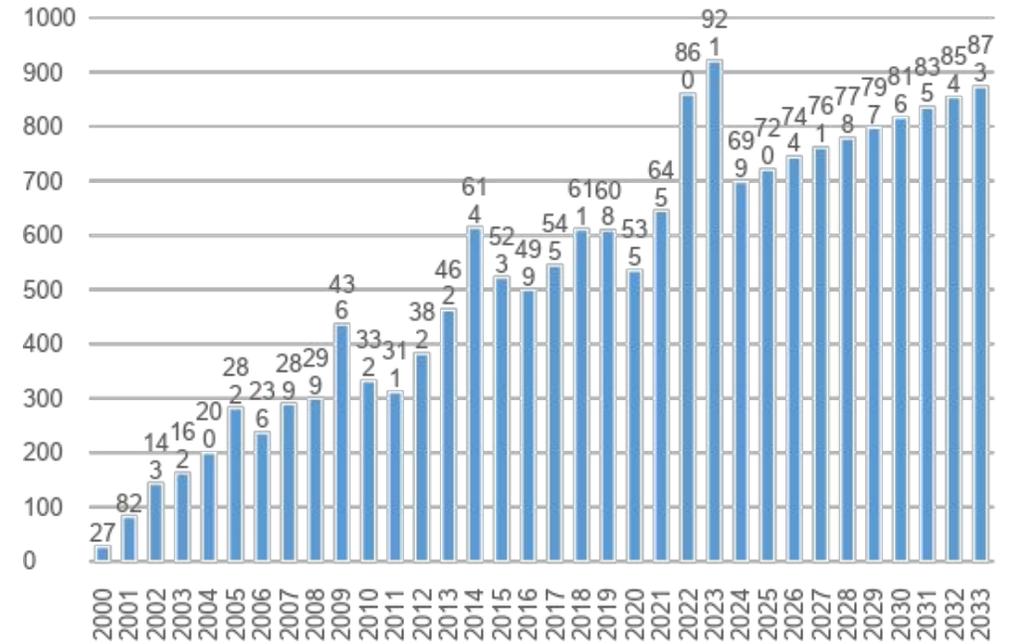
World and domestic prices are to follow the same upward trend.

\* t refers to metric ton

# Soy meal



■ Soya meal, quantity produced, thsd t



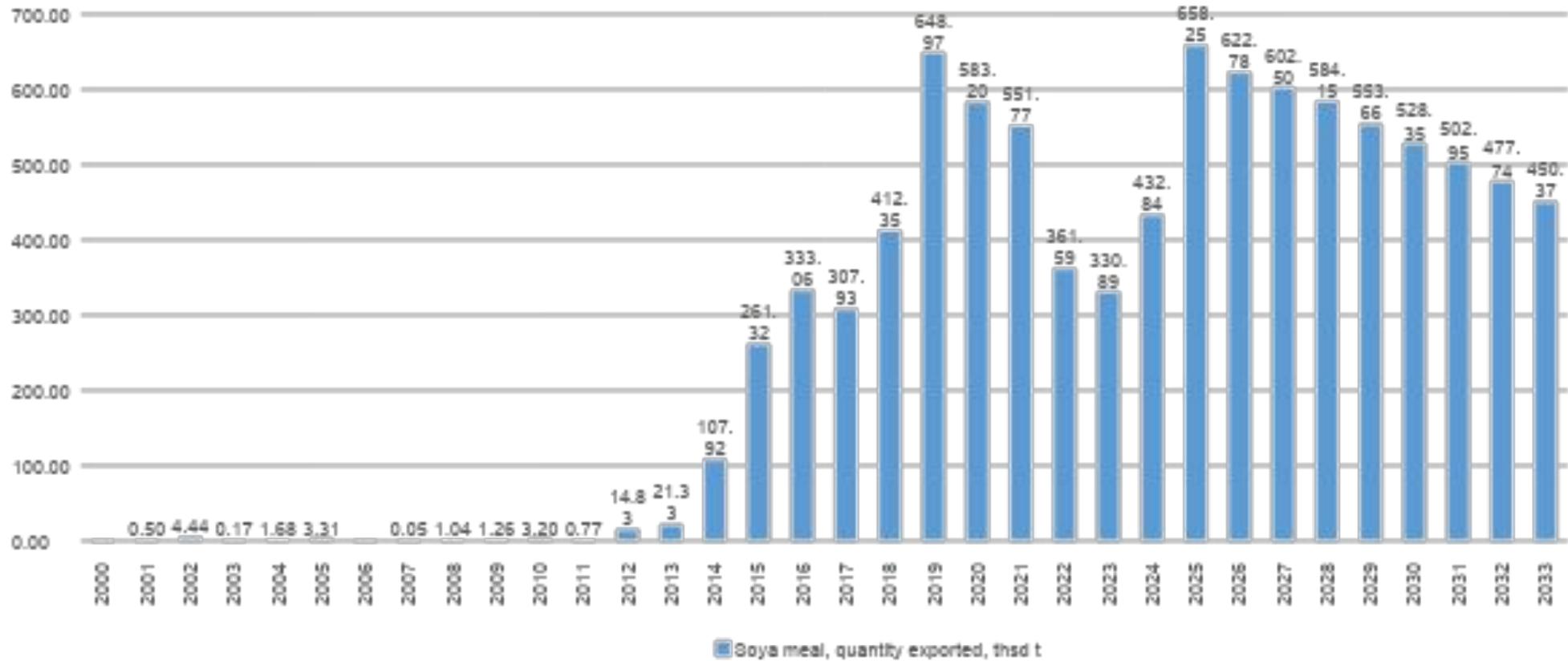
■ Soya meal, total domestic use, thsd t

Same as with soybean oil, the production of soy meal is anticipated to begin a decline starting from 2025, primarily due to a general shift away from soybeans in favor of rapeseed cultivation.

Consumption of soy meal is set to rise, driven by increasing demand for poultry feed.

\* t refers to metric ton

# Soy meal

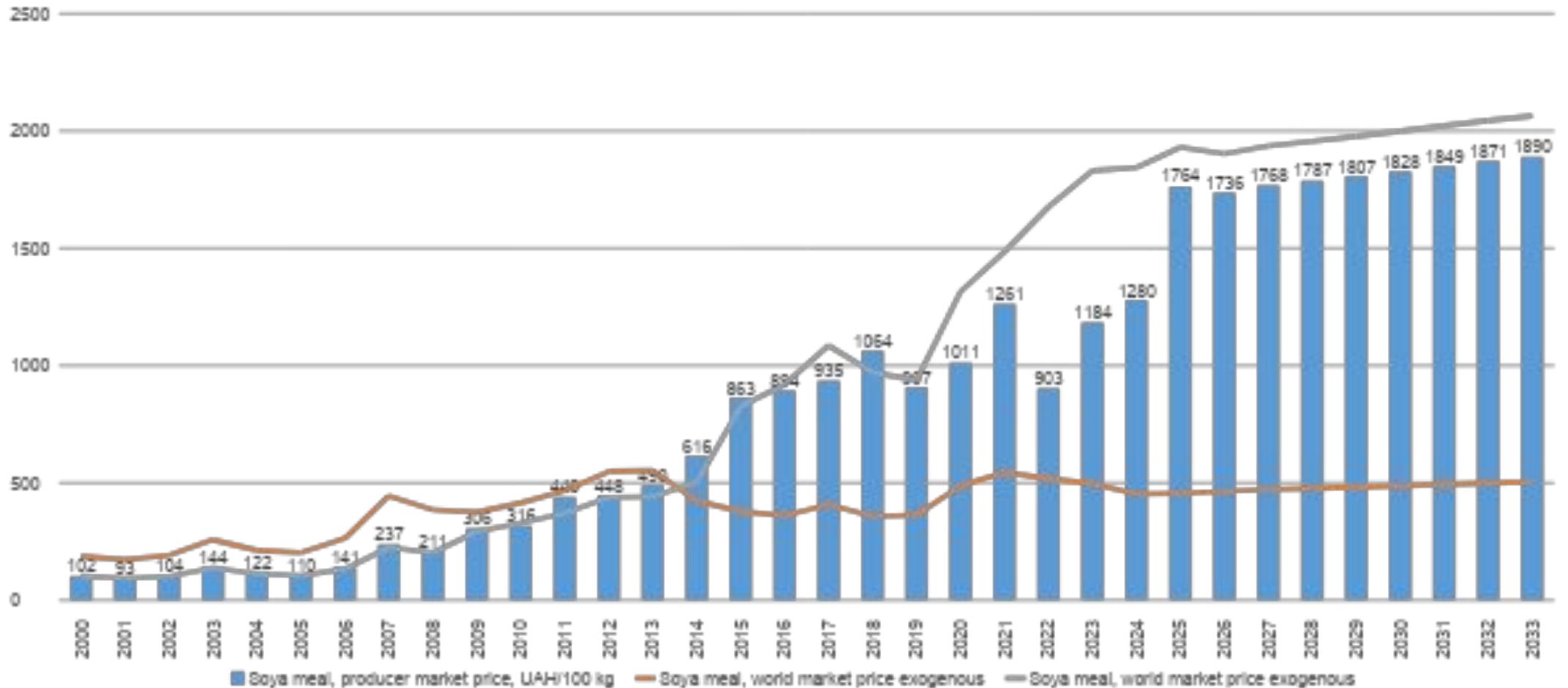


Exports will have a downward trend after a spike.

Imports will remain below 1 thsd t

\* t refers to metric ton

# Soy meal



Domestic prices Including VAT

Soy meal prices will follow positive but moderate trend.

\* t refers to metric ton

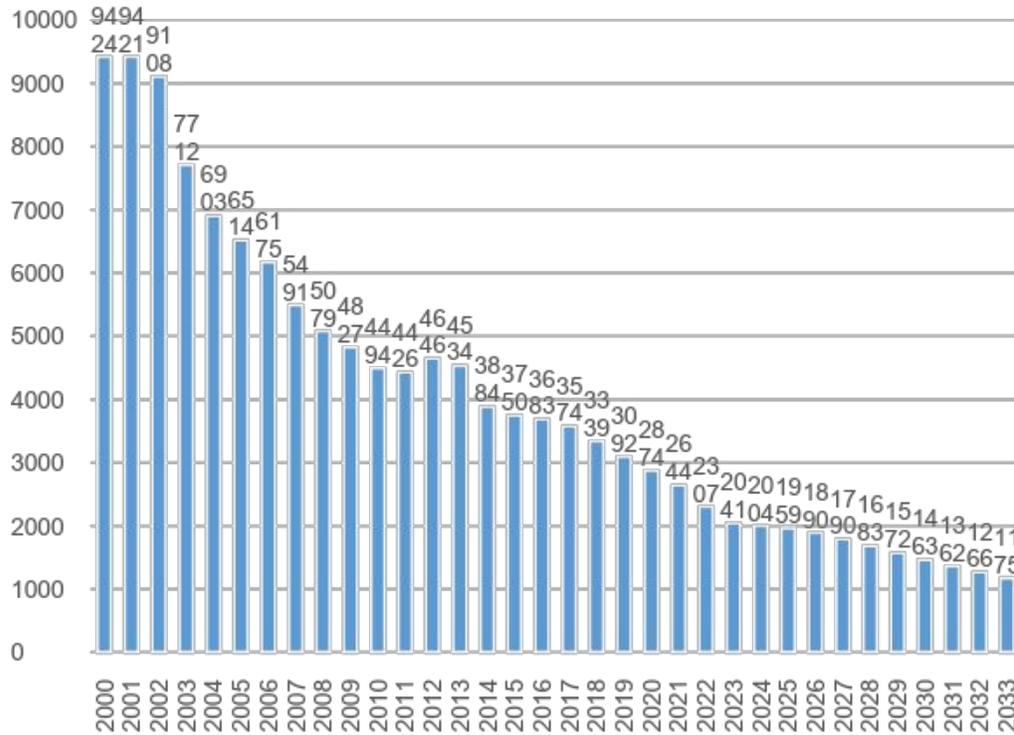
# 7 Outlook: Livestock



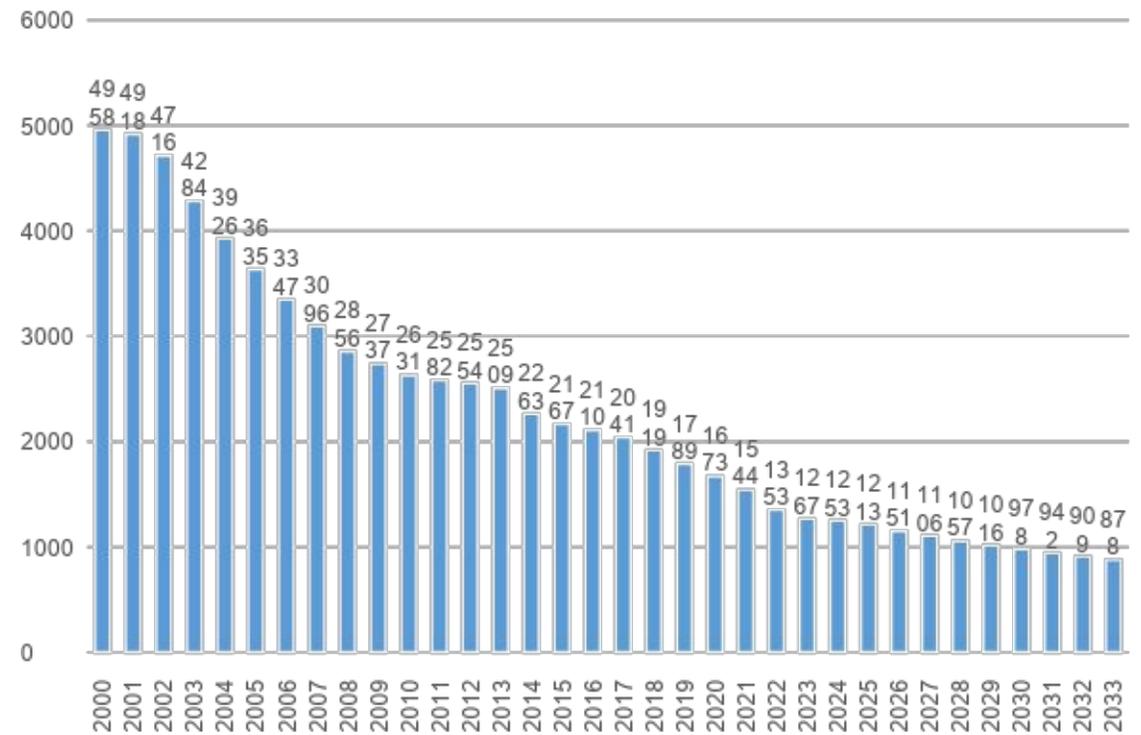
# Cattle, beef and milk

- Both beef and milk sub-sectors in Ukraine, which are closely linked, have been experiencing a downward trend in livestock numbers over the past two decades, due to very low profitability of the sector.
- The full-scale invasion by RF exacerbated the decline in cattle livestock numbers, causing an immediate drop in production in beef and milk.
- Although a recovery in numbers is anticipated after 2024, the pre-existing negative trends, characterized by low efficiency and high operational costs, will continue affecting the industries.
- At the same time, average slaughter weight and milk yield have been increasing throughout the last two decades, thanks to the shift from household to enterprise production and adoption of more efficient technologies and practices.

# Cattle, beef and milk



■ Total cattle, ending, thsd head

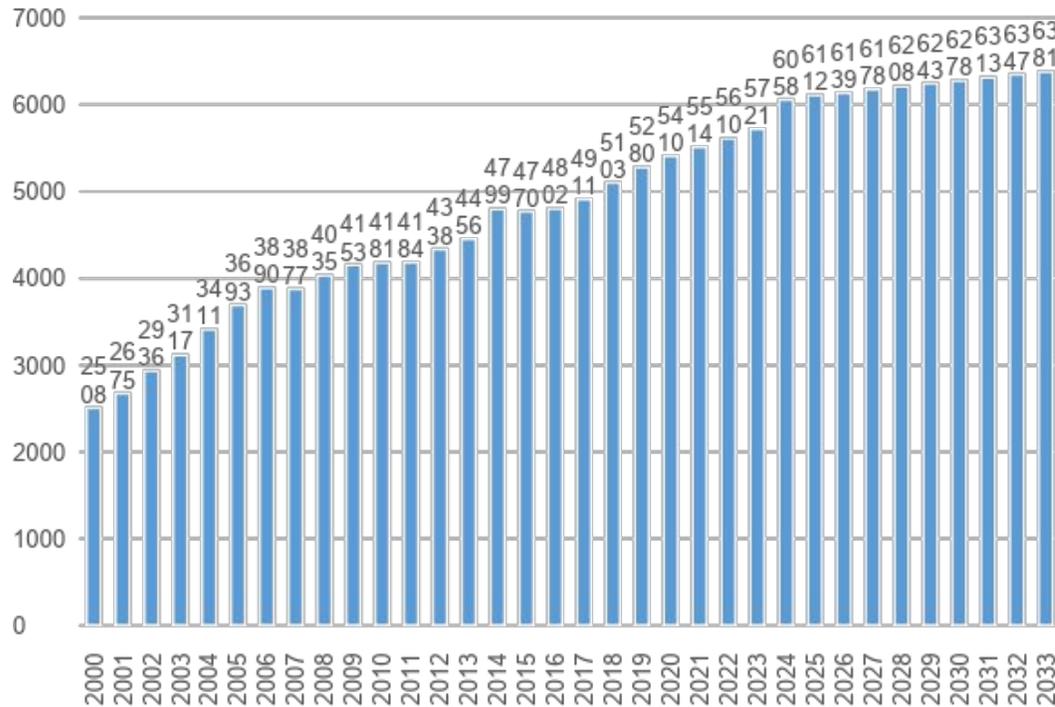


■ Dairy cows, ending, thsd head

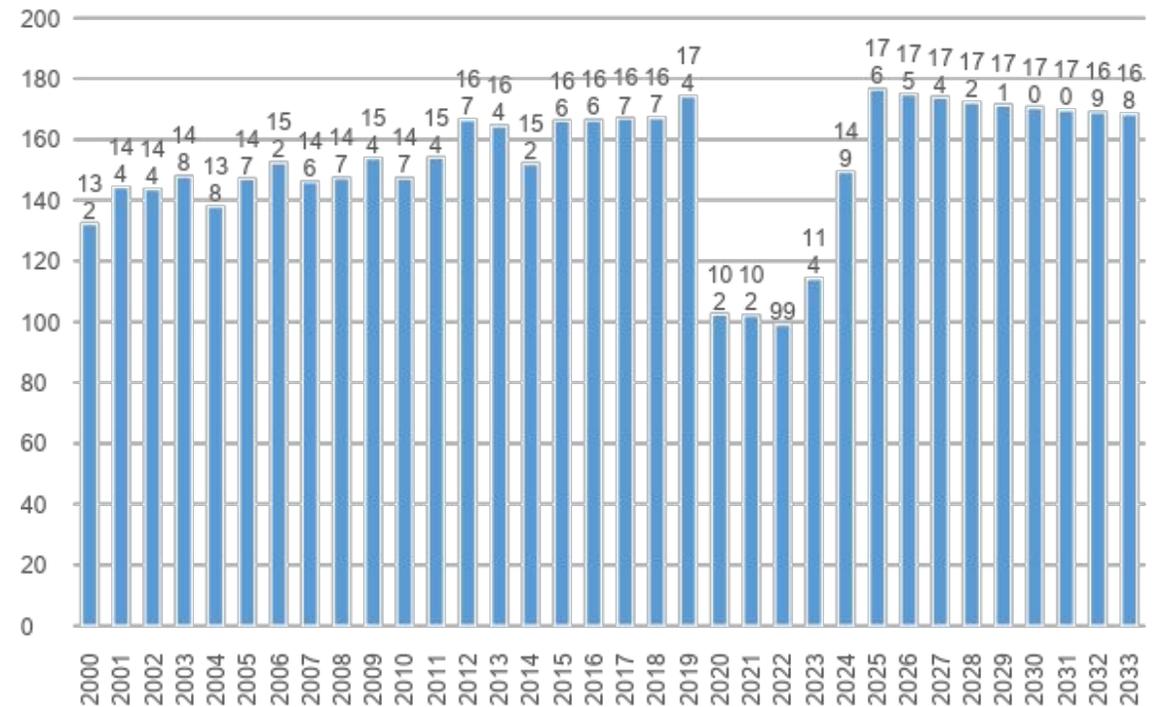
Beef and milk sub-sectors in Ukraine have been closely linked and have been experiencing a downward trend in livestock numbers over the past two decades.

Negative trend for the total cattle number is expected to remain.

# Cattle, beef and milk



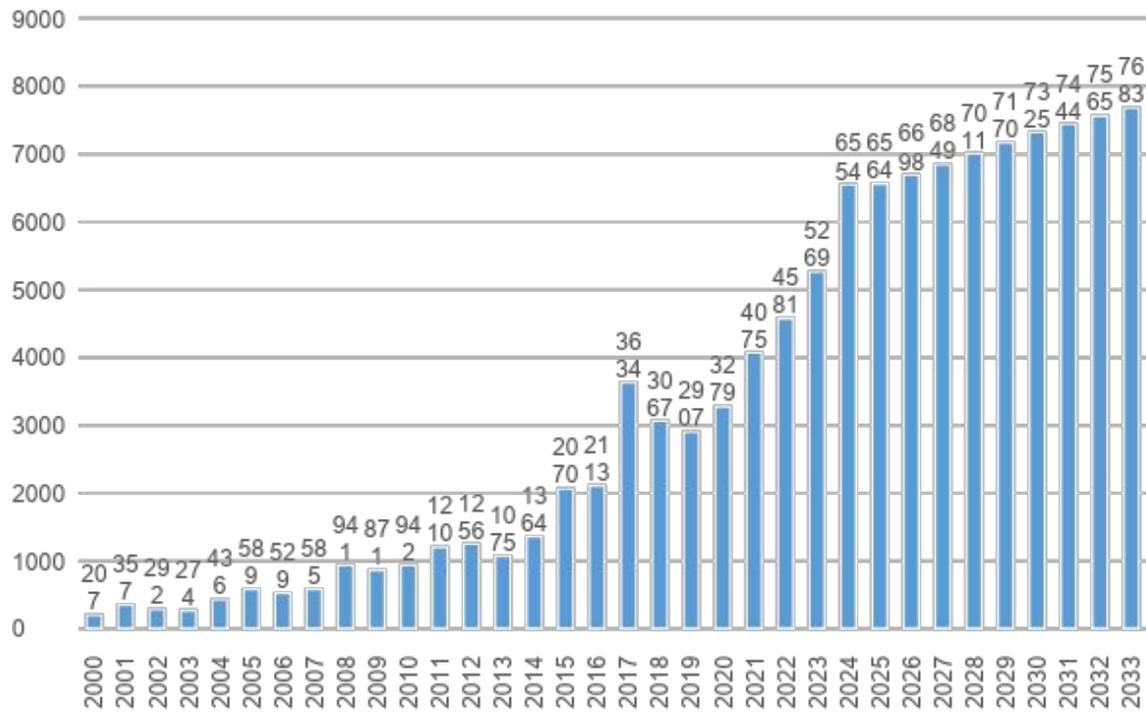
■ Dairy cows milk, production per cow, kg/head



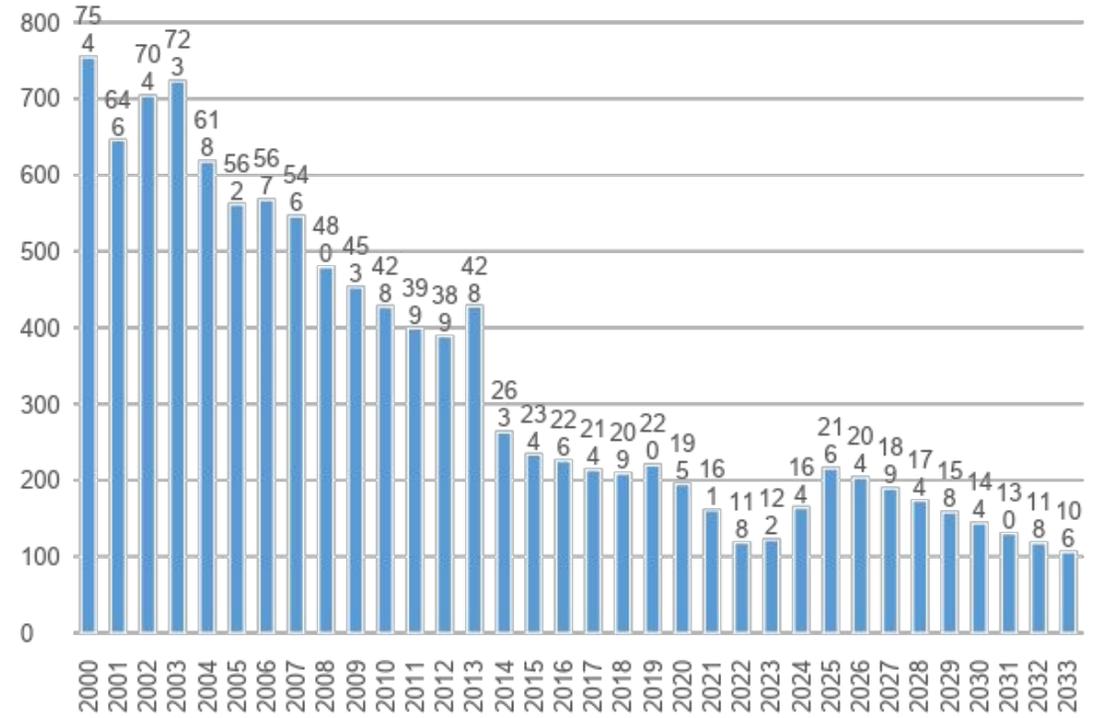
■ Cattle, slaughter weight, kg/head

Similar to the increase in average slaughter weight, milk yield have been increasing throughout the last two decades, thanks to the shift from household to enterprise production and adoption of more efficient technologies and practices.

# Cattle, beef and milk

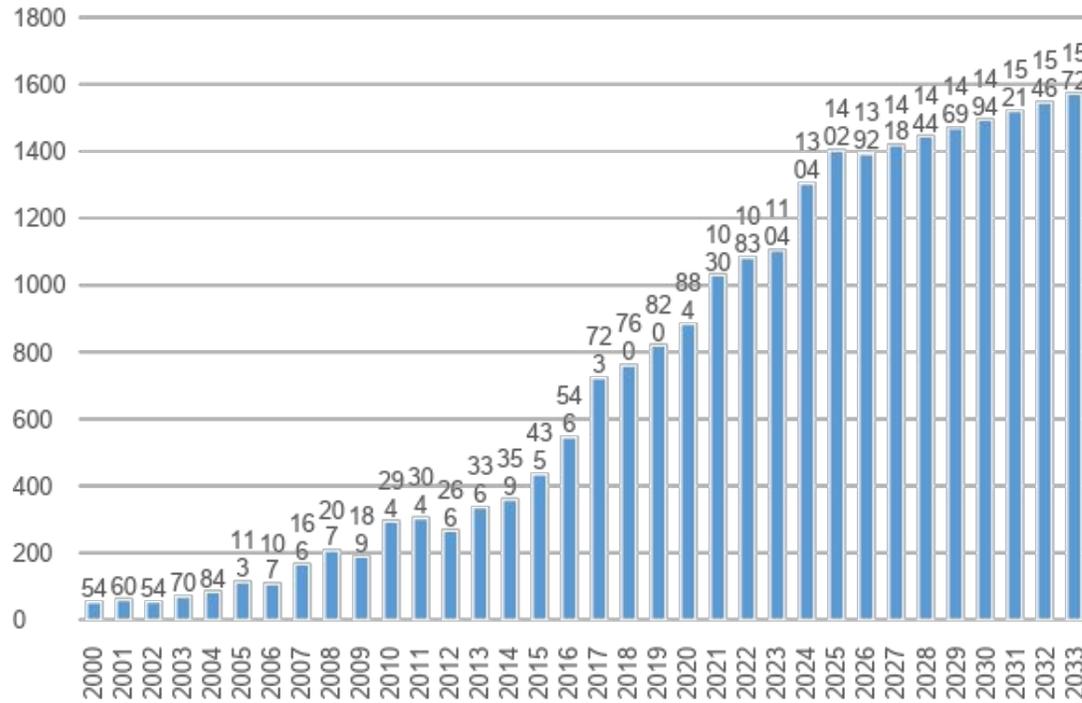


■ Beef & veal, producer market price, UAH/100 kg

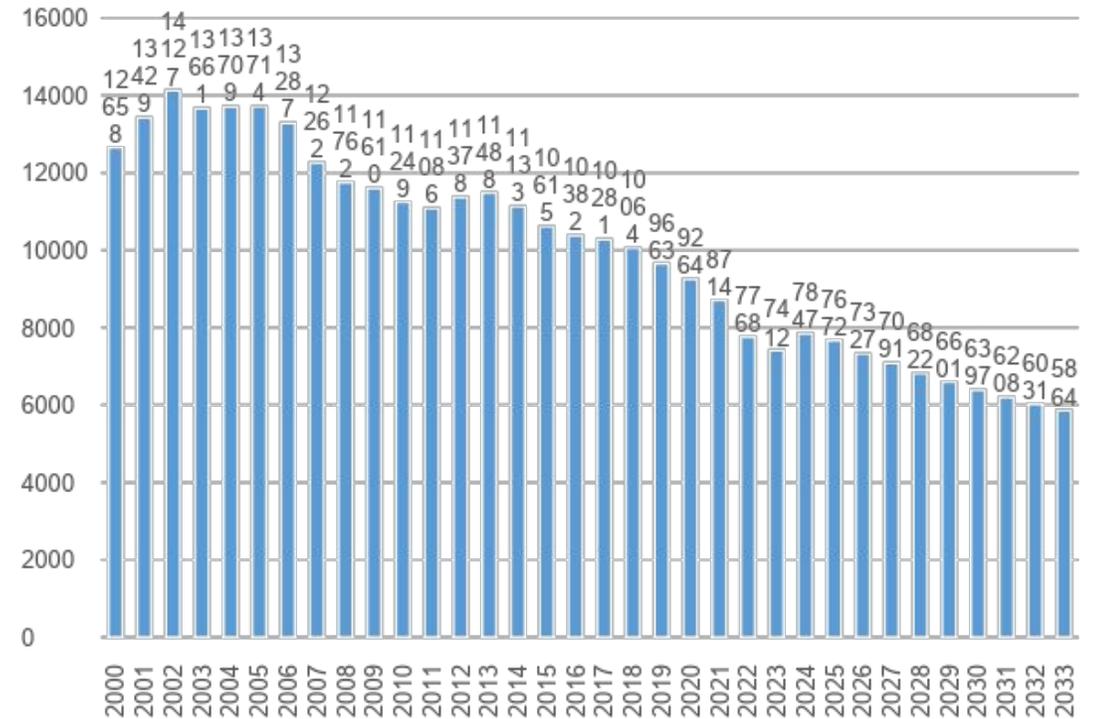


■ Beef & veal, quantity produced, thsd t

# Cattle, beef and milk

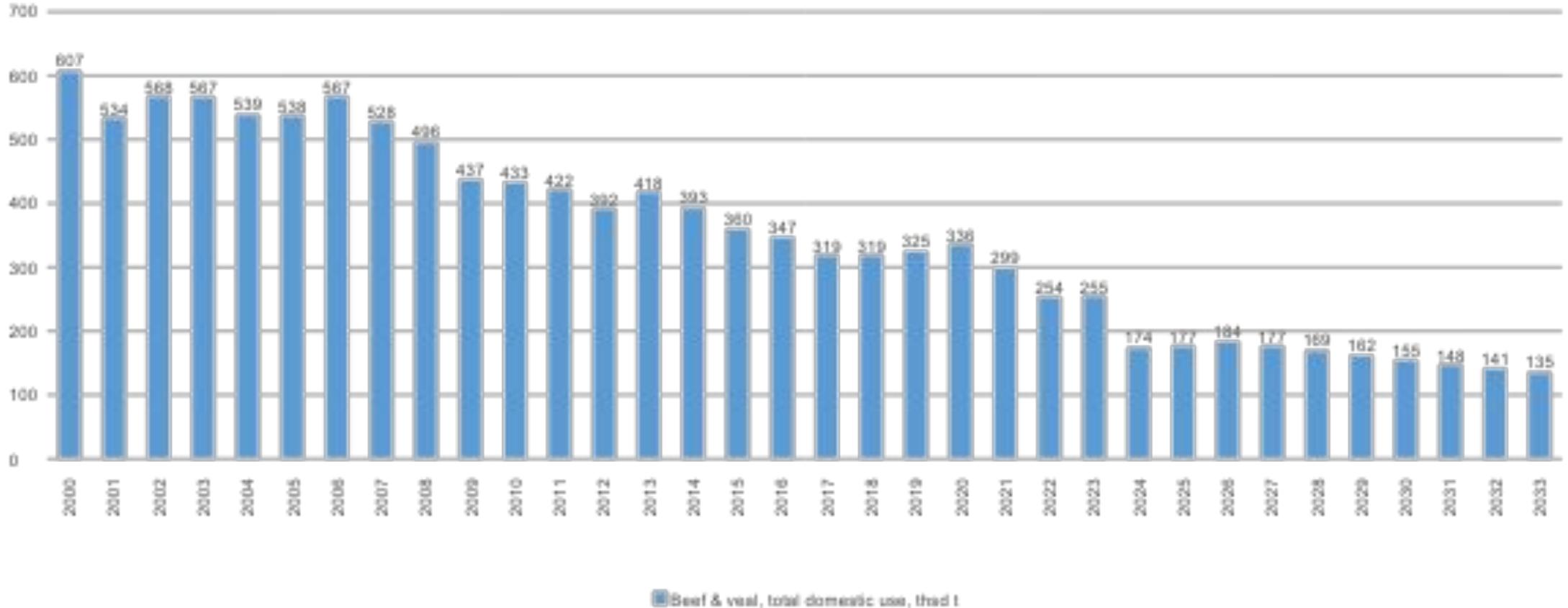


■ Total whole milk, producer market price, UAH/100 kg



■ Total whole milk, quantity collected, thsd t

# Cattle, beef and milk



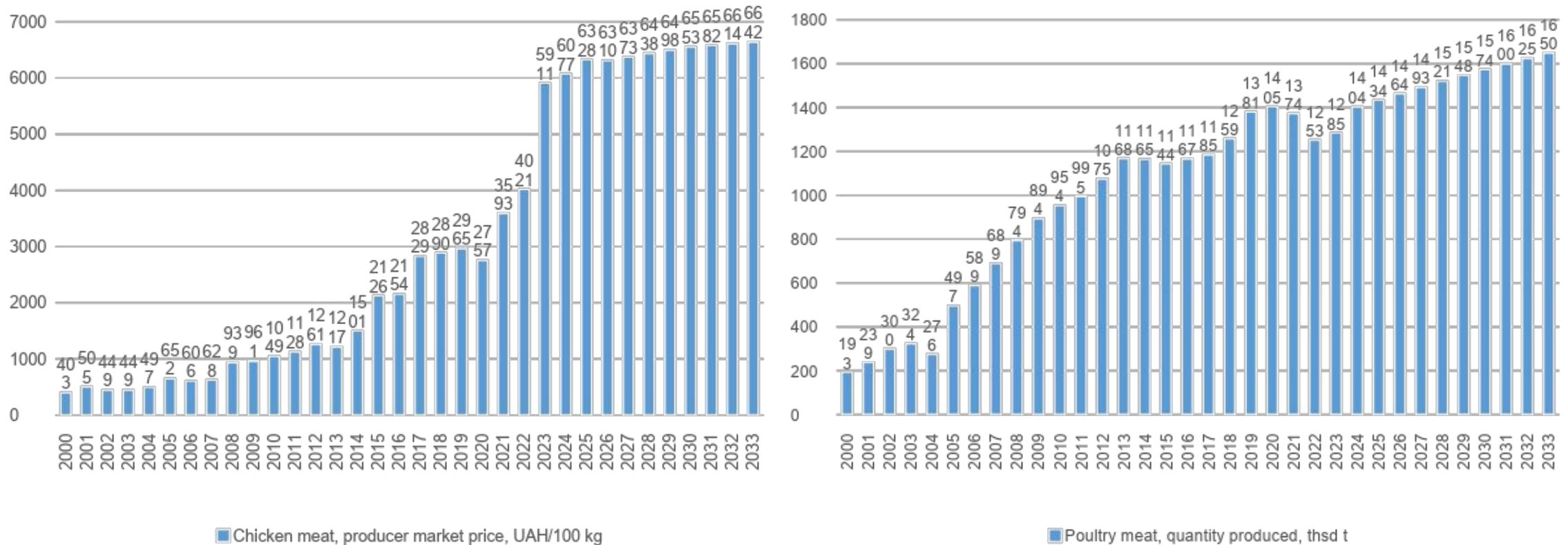
Negative trend in beef consumption is expected to persist, with poultry serving as a protein replacement for the domestic consumers.

\* t refers to metric ton

# Poultry meat and eggs

- The chicken meat and egg markets in Ukraine have witnessed a consistent growth over the past two decades, primarily due to the shift of production from households to enterprises, which are largely benefiting from economies of scale.
- Increase in production, coupled with the fact that the domestic prices are lower than global averages, has also led to a rise in exports.
- Post-war projections indicate that production levels of meat and eggs are expected to recover to their 2021 benchmarks and a pre-2022 positive trend in exports is expected to resume (currently taking 32% of total production for poultry meat and 15% for eggs with the remainder going to domestic consumption).
- Domestic consumption of poultry meat and eggs is anticipated to rise and stabilize not only due to the return of displaced individuals but also because of an increasing per capita consumption trend. This trend is further fueled by a decrease in beef consumption, with poultry serving as a protein replacement.

# Poultry meat and eggs

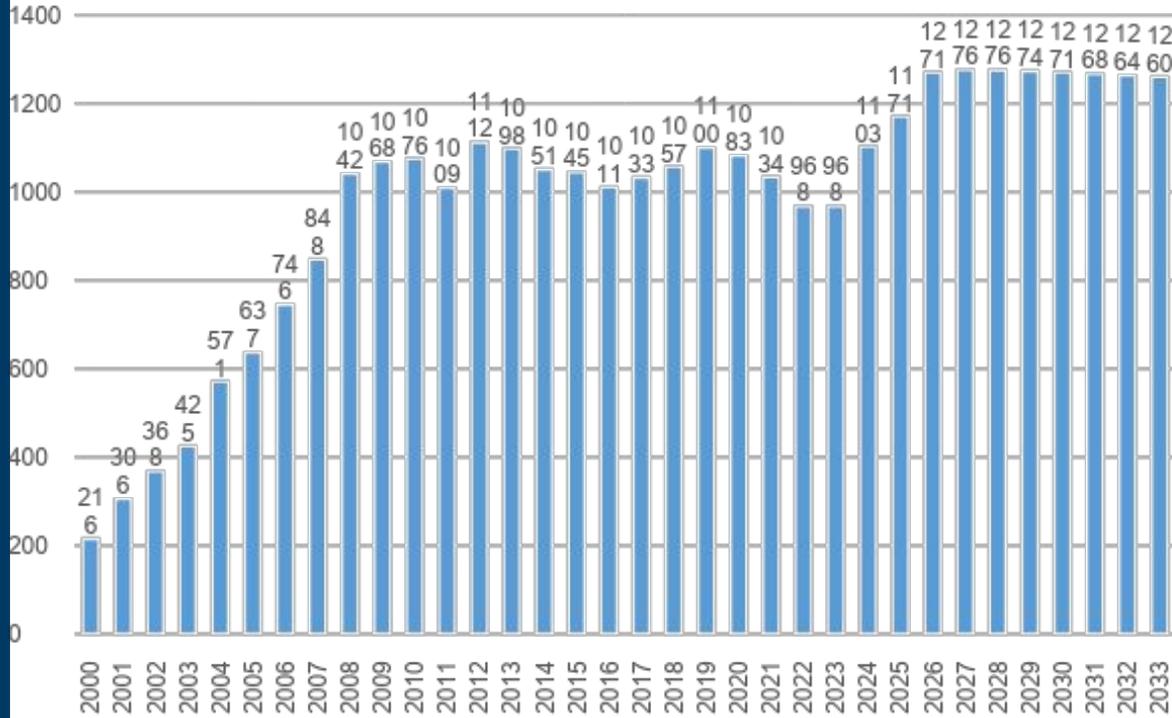


The chicken meat and egg markets in Ukraine have witnessed a consistent growth over the past two decades, primarily due to the shift of production from households to enterprises, which are largely benefiting from economies of scale.

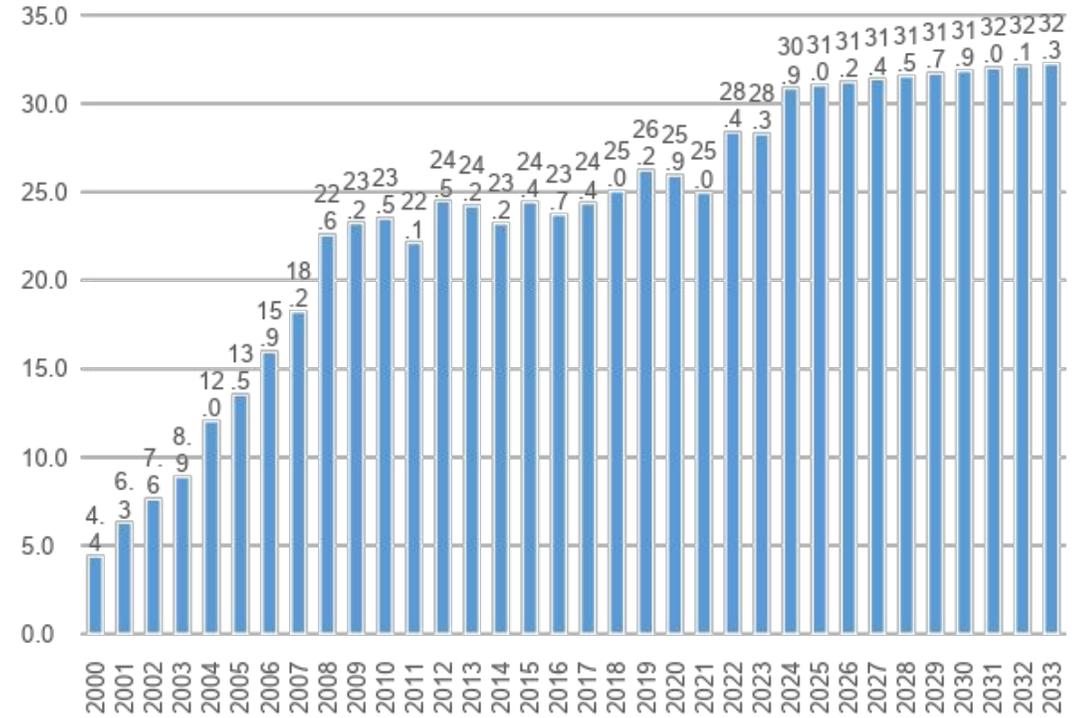
Post-war projections indicate that production levels are expected to recover to their 2021 benchmarks.

\* t refers to metric ton

# Poultry meat and eggs



■ Poultry meat, domestic use, thsd t

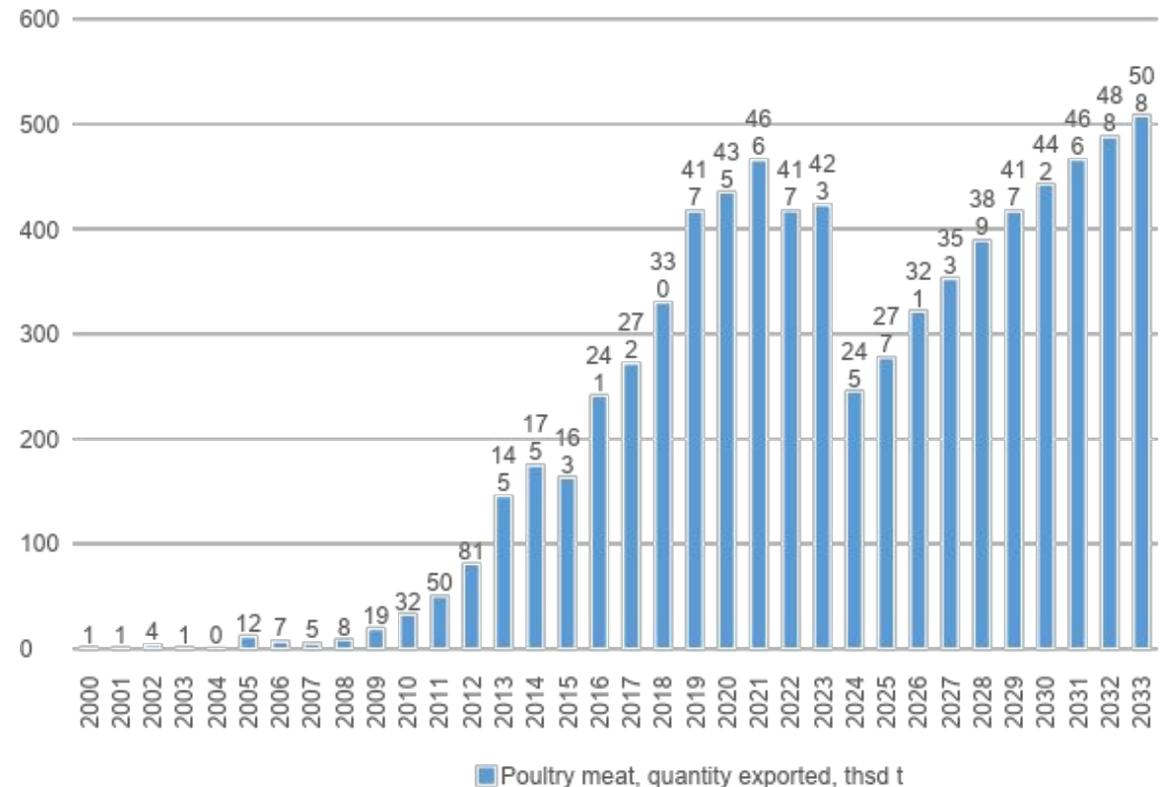
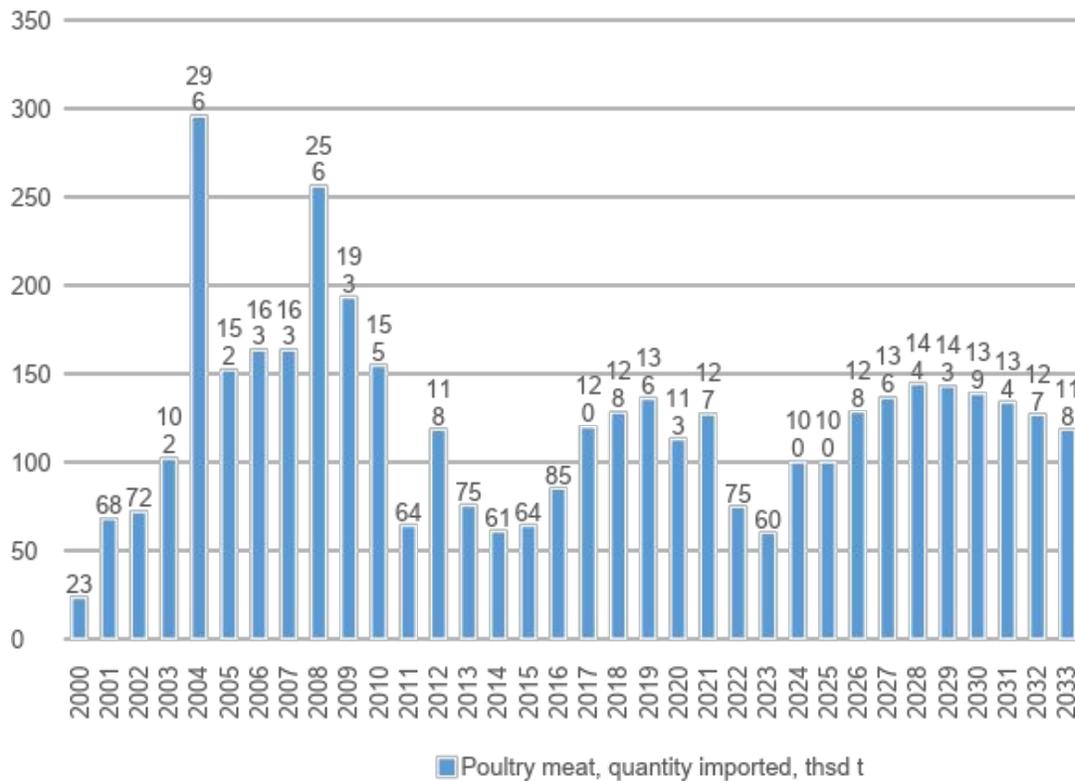


■ Poultry meat, per-capita domestic use, kg

Domestic consumption is anticipated to rise and stabilize not only due to the return of displaced individuals but also because of an increasing per capita consumption trend. This trend is further fueled by a decrease in beef consumption, with poultry serving as a protein replacement.

\* t refers to metric ton

# Poultry meat and eggs

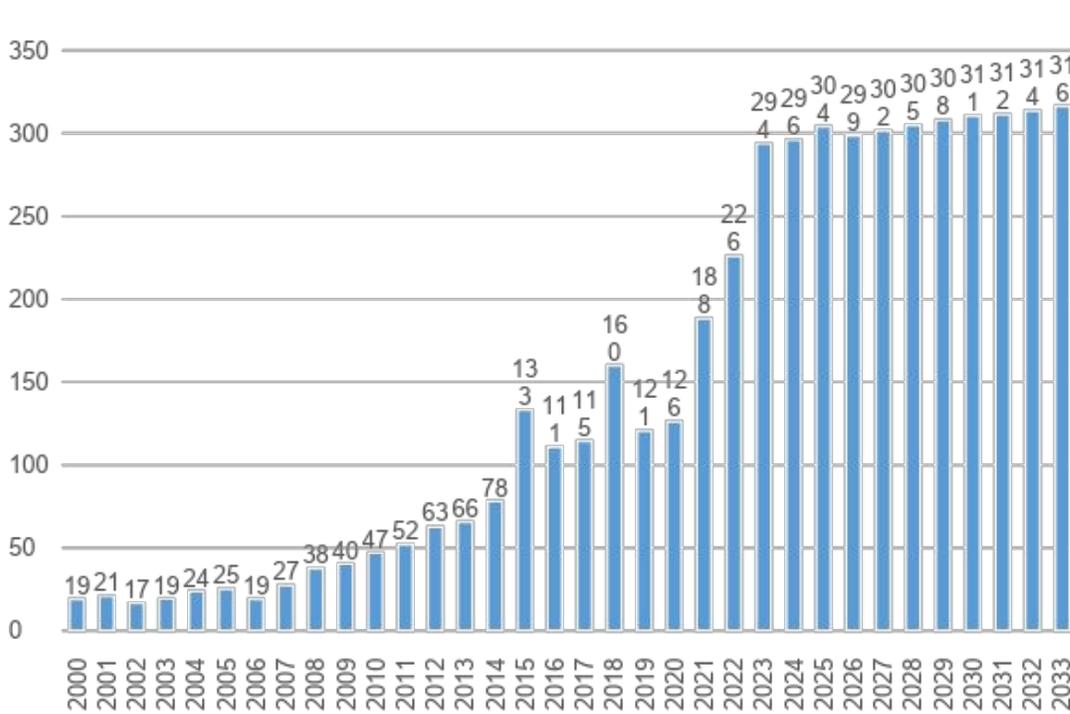


The mentioned increase in production, coupled with the fact that the domestic prices are lower than global averages, has also led to a rise in exports.

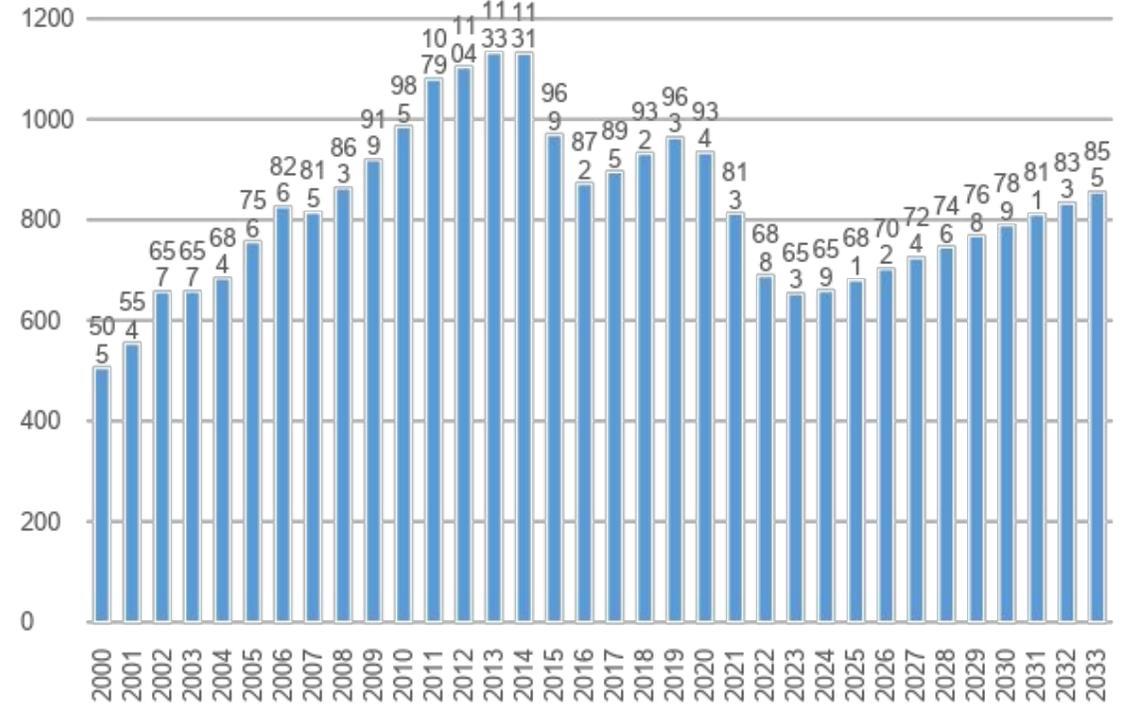
Despite the war-caused disruption, a pre-2022 positive trend in exports is also expected to resume.

\* t refers to metric ton

# Poultry meat and eggs



■ Eggs, producer market price, UAH/100 items

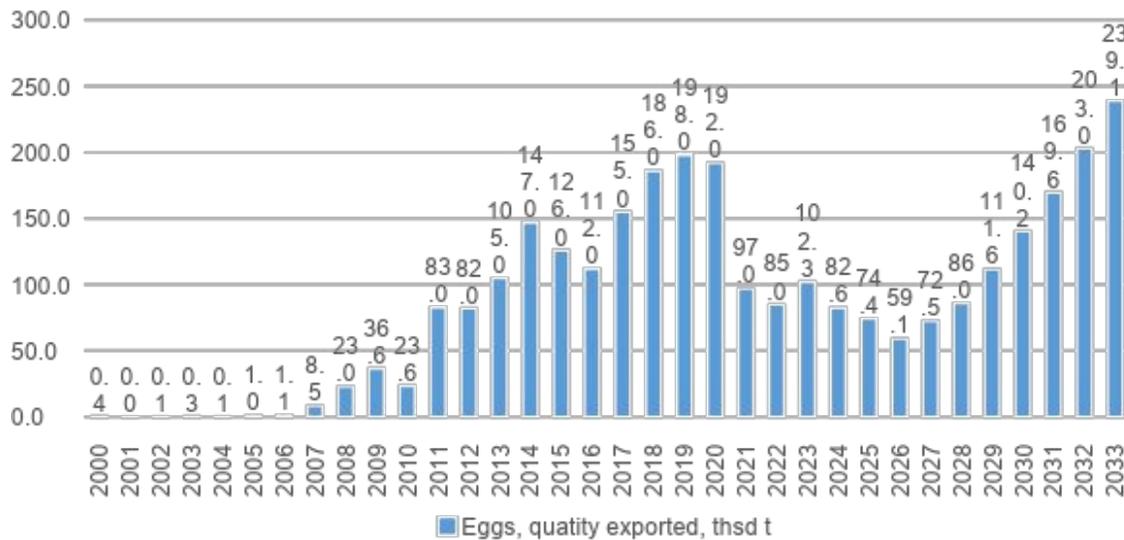
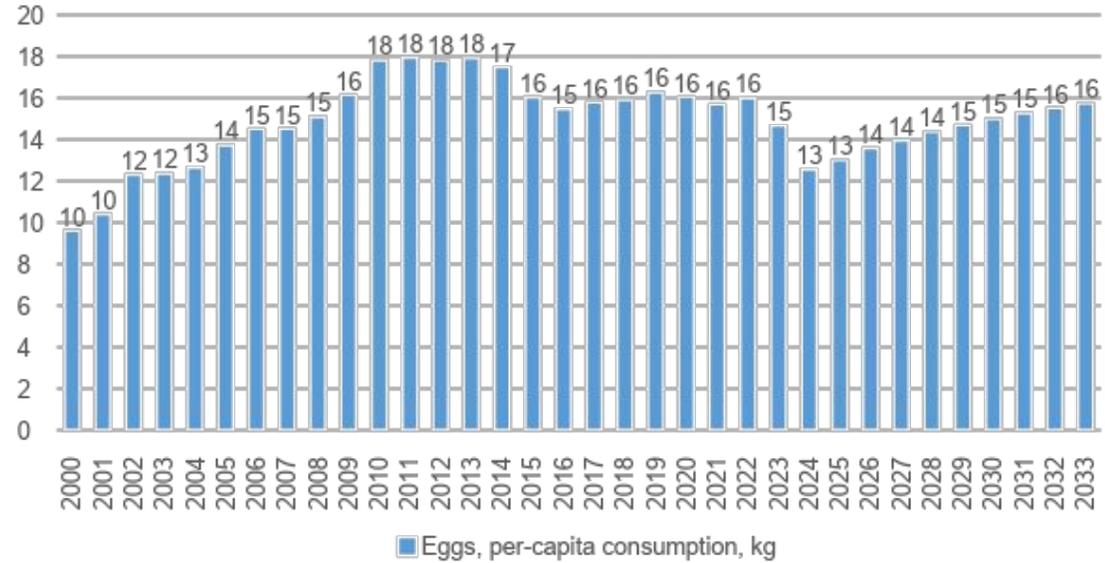
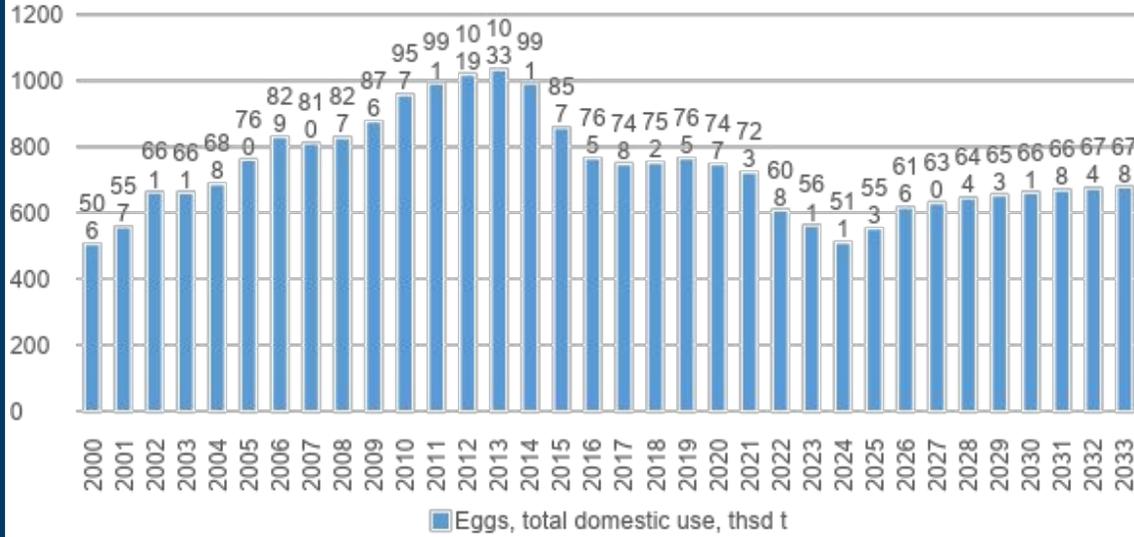


■ Eggs, quantity produced, thsd t

Similar to poultry meat production, production of eggs is expected to return to the positive trend.

\* t refers to metric ton

# Poultry meat and eggs



\* t refers to metric ton



# 8 The potential for development of niche markets

[https://kse.ua/wp-content/uploads/2023/12/ukr\\_PB\\_outlook\\_december-1.pdf](https://kse.ua/wp-content/uploads/2023/12/ukr_PB_outlook_december-1.pdf)

# Methodology for assessing the potential for development of niche markets

## Stage 1

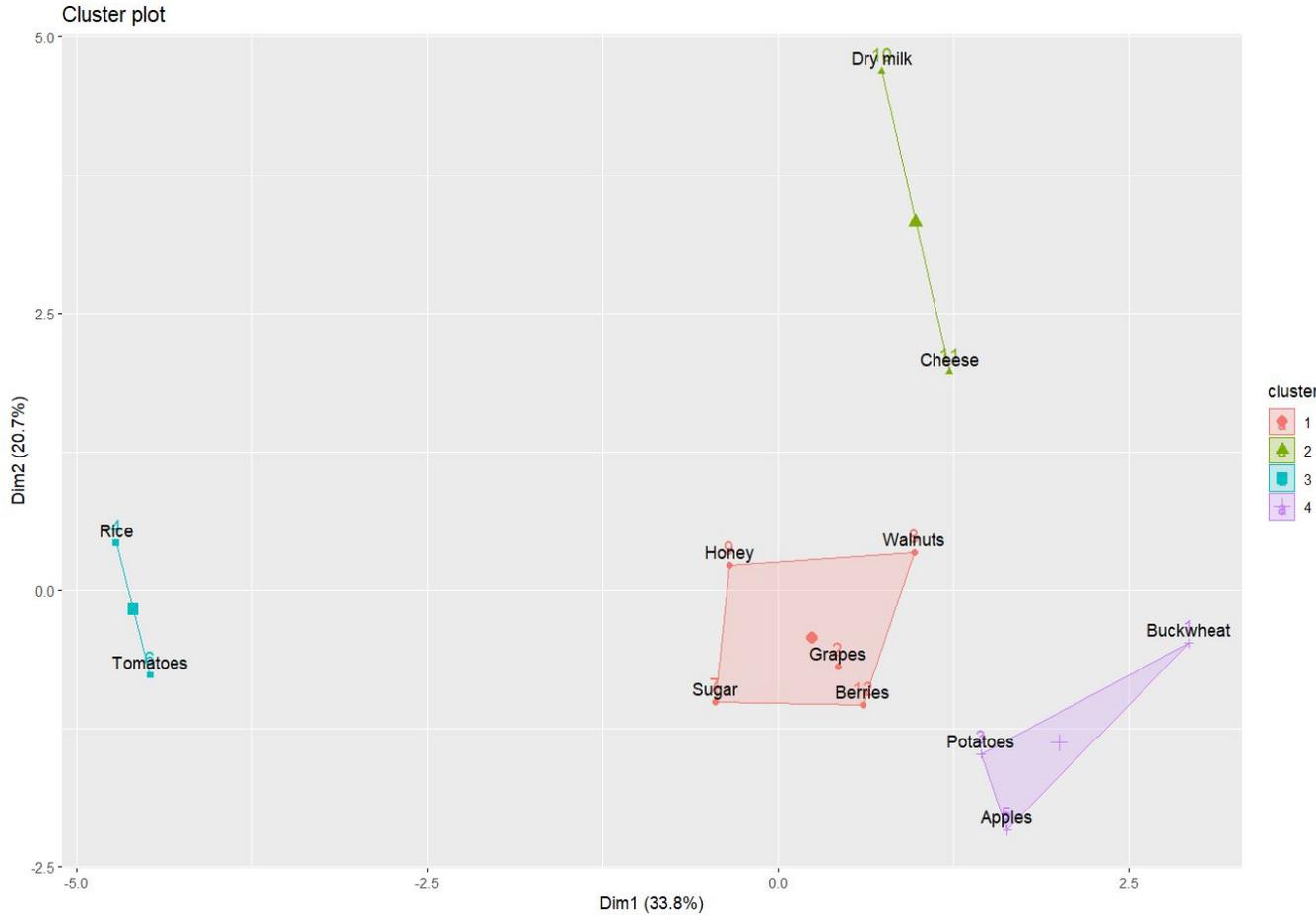
Assessment of development indices for agricultural markets (cultivated area, production volume, yield/productivity of animals and crops, domestic market prices, export and import values)

## Stage 2

Cluster analysis of commodity markets based on partial indices reflecting the average growth rates of commodity market development level indicators

## Stage 3

Evaluation of the trend nature of agricultural market development indicators



## Results of the cluster analysis of selected niche and domestic agricultural markets

Markets in the fourth (potatoes, apples, buckwheat) and second clusters (dry milk and cheese) are promising.

# Results of the cluster analysis and integral development trend indices

Market	Cluster analysis	Integral development trend index
Cheese	2	0.8571
Buckwheat	4	0.6923
Potatoes	4	0.6154
Apples	4	0.6154
Dry milk	2	0.7143
Sugar beet	1	0.5385
Berries	1	0.61538
Grapes (wine and table grapes)	1	0.6923
Walnut	1	0.3846
Rice	3	0.1538
Tomatoes	3	0.2308
Honey	1	0.2308



**Thank you**

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**<https://t.me/kseagrocenter>**