Ukraine oilseed and grain markets till 2030

Paper presented at the IAMO Forum 2017

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Content

- Motivation

- Method

- Results

- Conclusion

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Motivation: Focus on Ukraine

What can Ukraine contribute to the supply of agricultural crops in the future?

- Important impacts on world agricultural market, especially grains and oilseeds

- Still significant agriculture production potentials
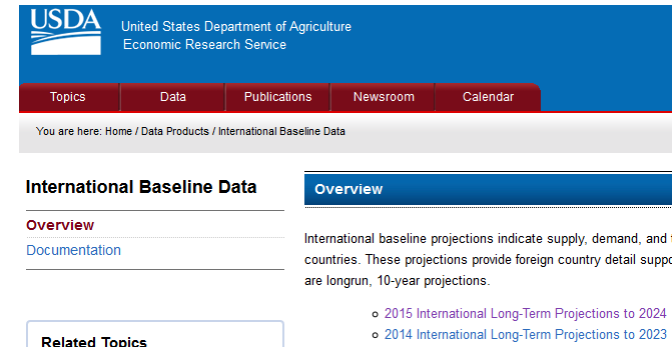
- Changing political-economic framework

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Influences on the Ukrainian crop sector

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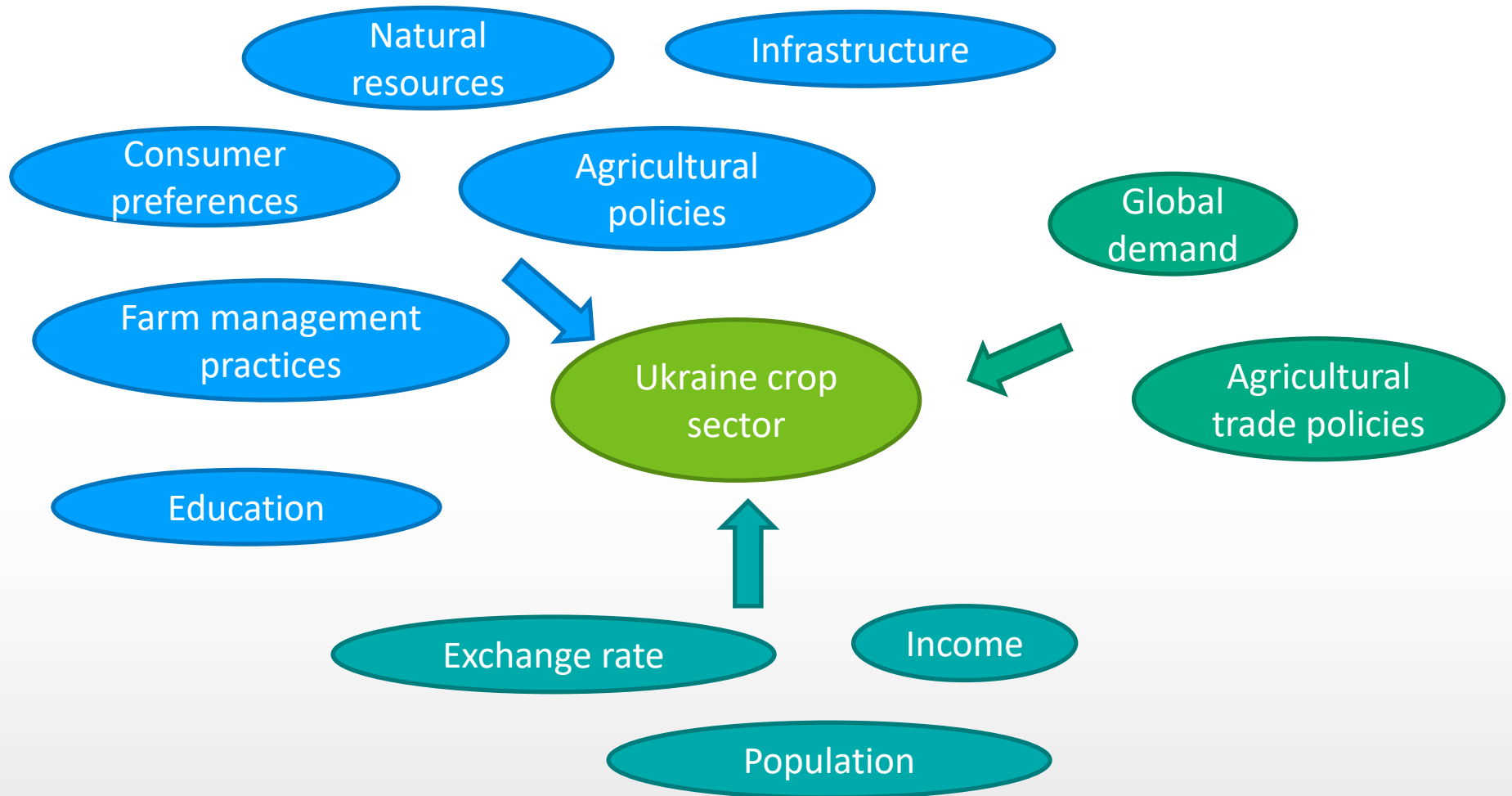
Projections for global or regional agricultural developments

Agriculture market projection

- Partial equilibrium models

    - AGLINK-COSIMO

    - USDA model

    - AGMEMOD

- General overview
- Specific focuses

USDA United States Department of Agriculture
Economic Research Service

| Topics | Data | Publications | Newsroom | Calendar |

You are here: Home / Data Products / International Baseline Data
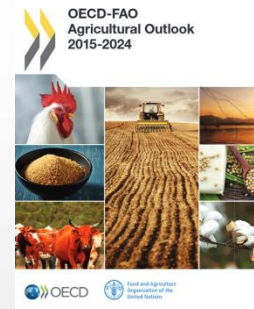
International Baseline Data

Overview
Documentation

Overview

International baseline projections indicate supply, demand, and tr
countries. These projections provide foreign country detail suppor
are longrun, 10-year projections.

Related Topics

o 2015 International Long-Term Projections to 2024
o 2014 International Long-Term Projections to 2023

OECD-FAO
Agricultural Outlook
2015-2024

JRC SCIENTIFIC AND POLICY REPORTS

The agri-food sector in Ukraine:
Current situation and market outlook
until 2025

Extension of the AGMEMOD
model towards Ukraine

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Method for projections for Ukraine

Partial equilibrium model

- Detailed and updated market representation
- Long time series
- Annual projections

Missing relevant factors for Ukraine

- Land use and yield potential based on bio-physical properties
- Bilateral trade and trade policies
- Interaction with other economic sectors

Incorporating information from models in AGMEMOD

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Model linkage – mapping and harmonization

- Mapping: Regions, sectors, variables, periods, units
- Harmonization: population and gross domestic product
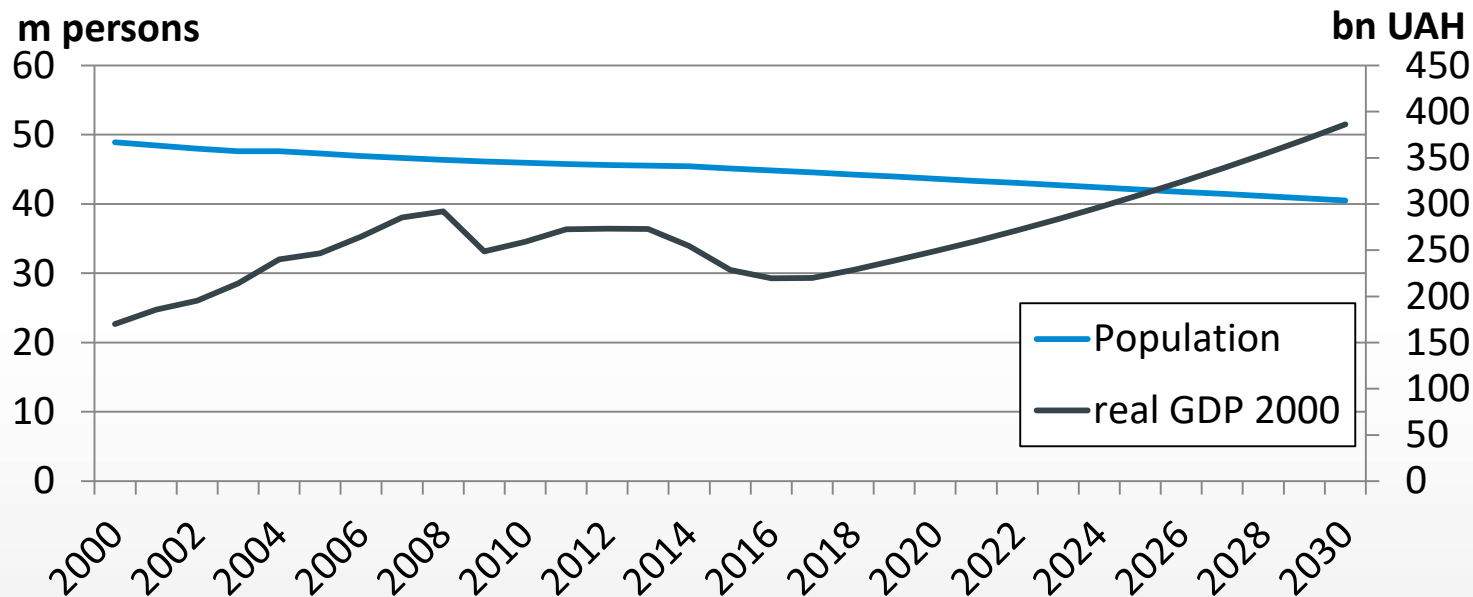
Historical and assumed developments of real 2000 GDP in bn UAH and population in m persons for Ukraine in the models

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Linkage – data exchange

Imports and exports

Yield and available area for agriculture

Yield

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Linkage – data exchange

Yield

- In AGMEMOD: first projection year is 3-year average of historical yields
- Afterwards annual percentage changes based on the GLOBIOM 10-year projections

Area

- Absolute annual changes in forest, grassland and other land from GLOBIOM implemented in AGMEMOD => land conversion to/ from cropland
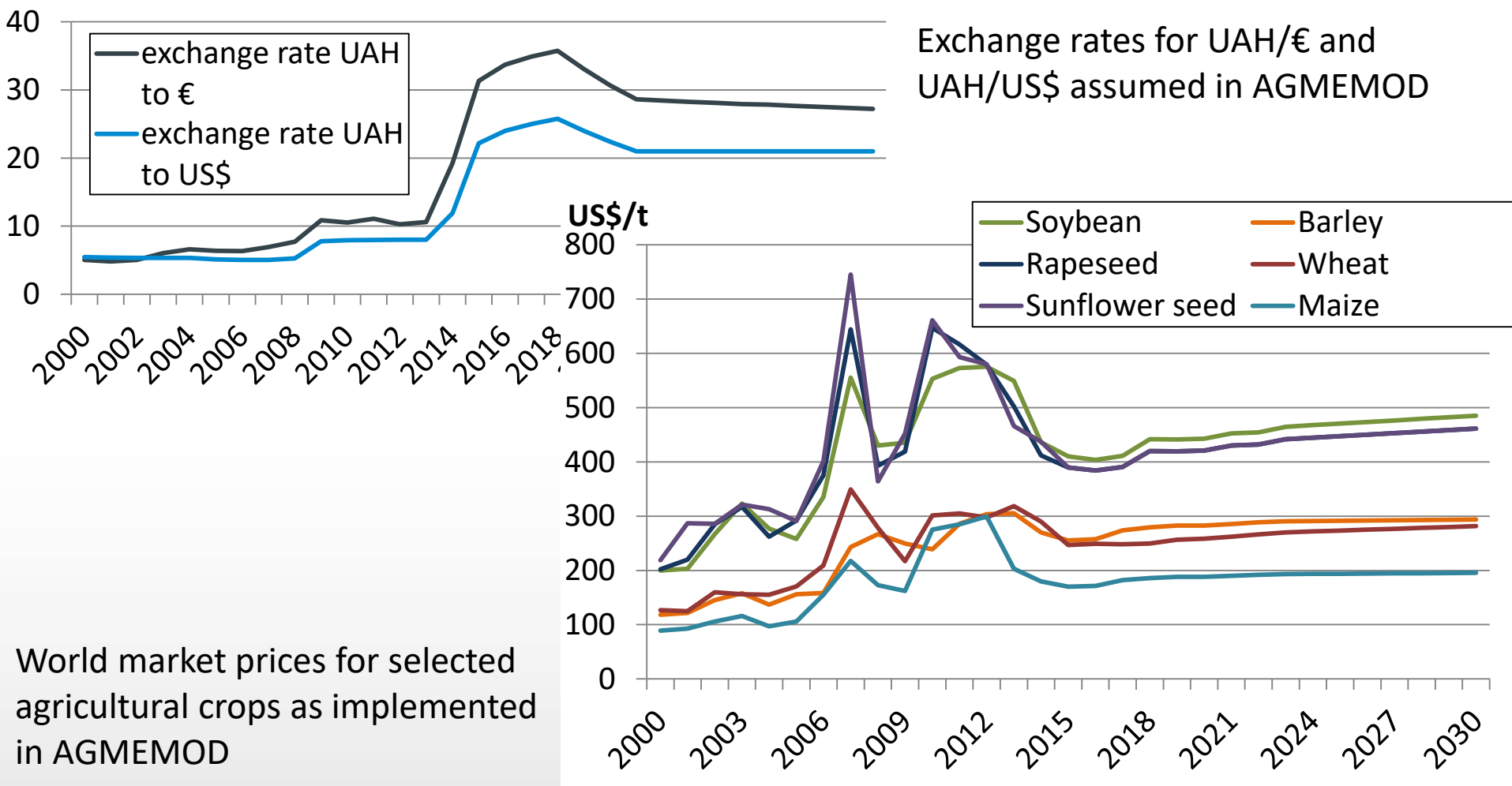
Trade

- Annual percentage changes of export and import volume from MAGNET

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Outlook scenario

- **Moderate economic development and technical progress**

- **Negotiated trade agreements (in MAGNET)**

  - DCFTAs of EU with Ukraine, Georgia and Moldova

  - Eurasian Economic Union between Russia, Armenia, Belarus, Kazakhstan, Kyrgyzstan

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Outlook scenario – additional exogenous assumptions

Exchange rates for UAH/€ and UAH/US$ assumed in AGMEMOD

- exchange rate UAH to €
- exchange rate UAH to US$

World market prices for selected agricultural crops as implemented in AGMEMOD

US$/t

- Soybean
- Rapeseed
- Sunflower seed
- Barley
- Wheat
- Maize

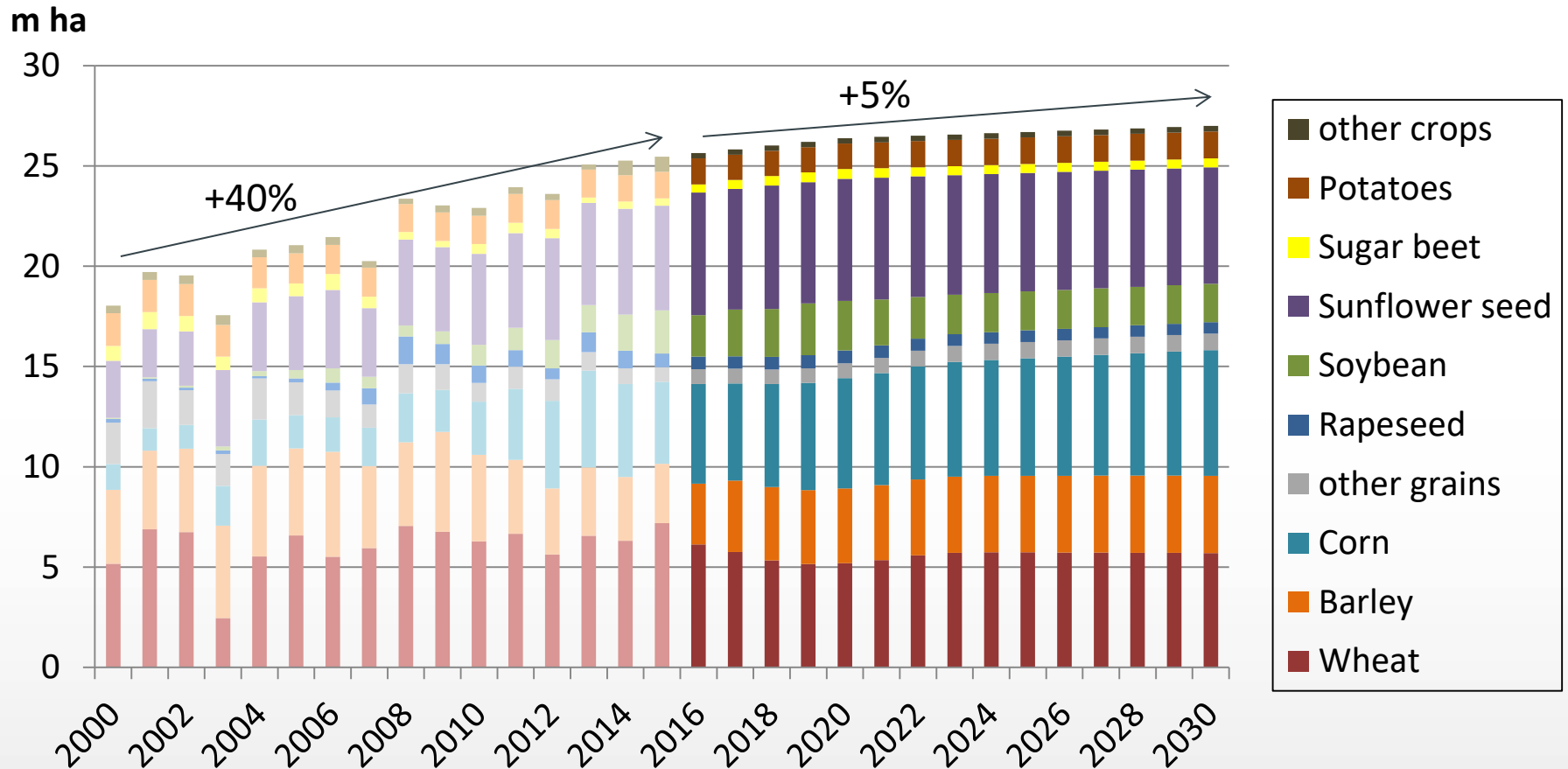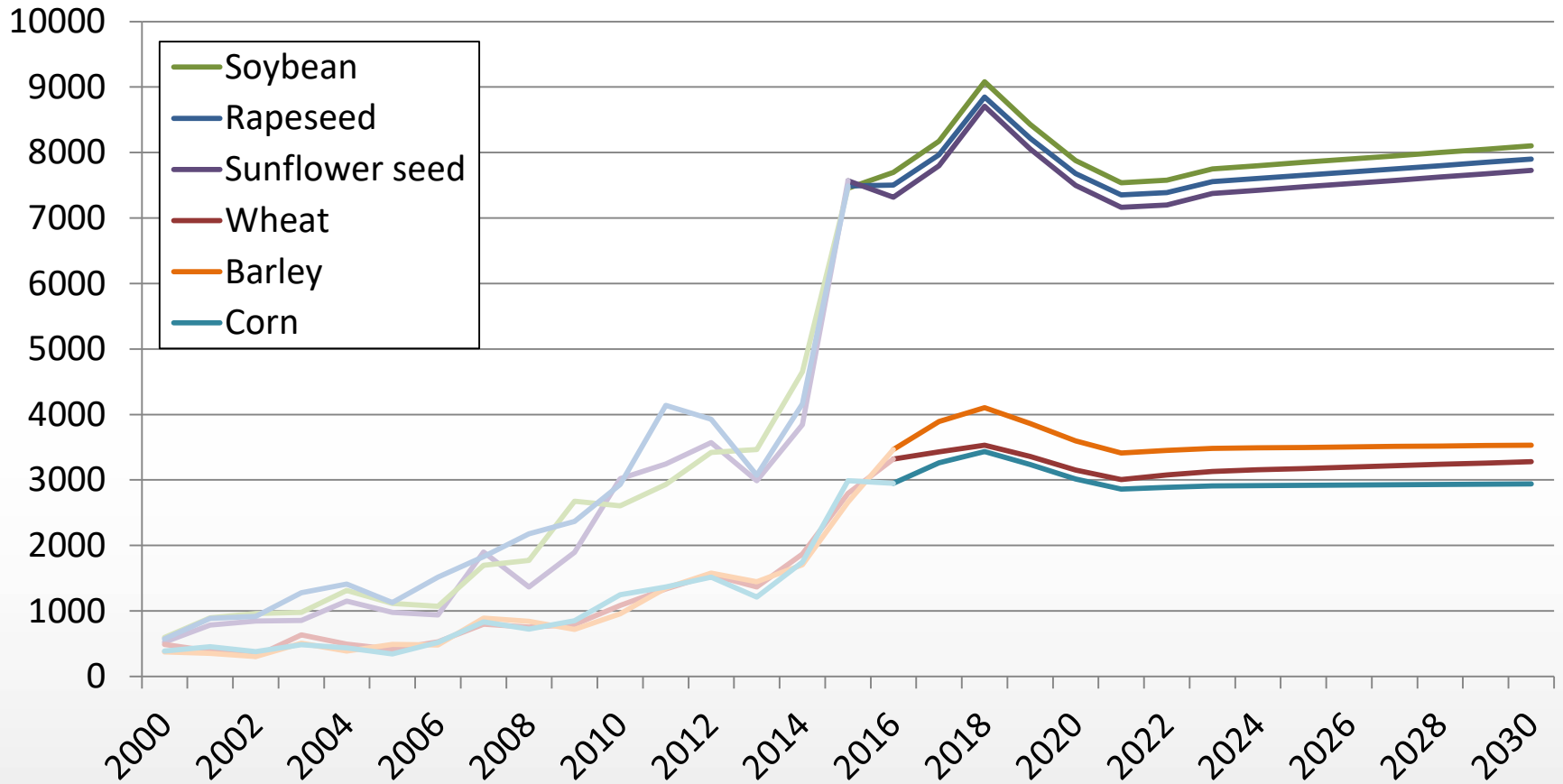**Verena Wolf**
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Results

- Historical data till 2013 or 2015
- Average weather conditions
- Assumptions dependent
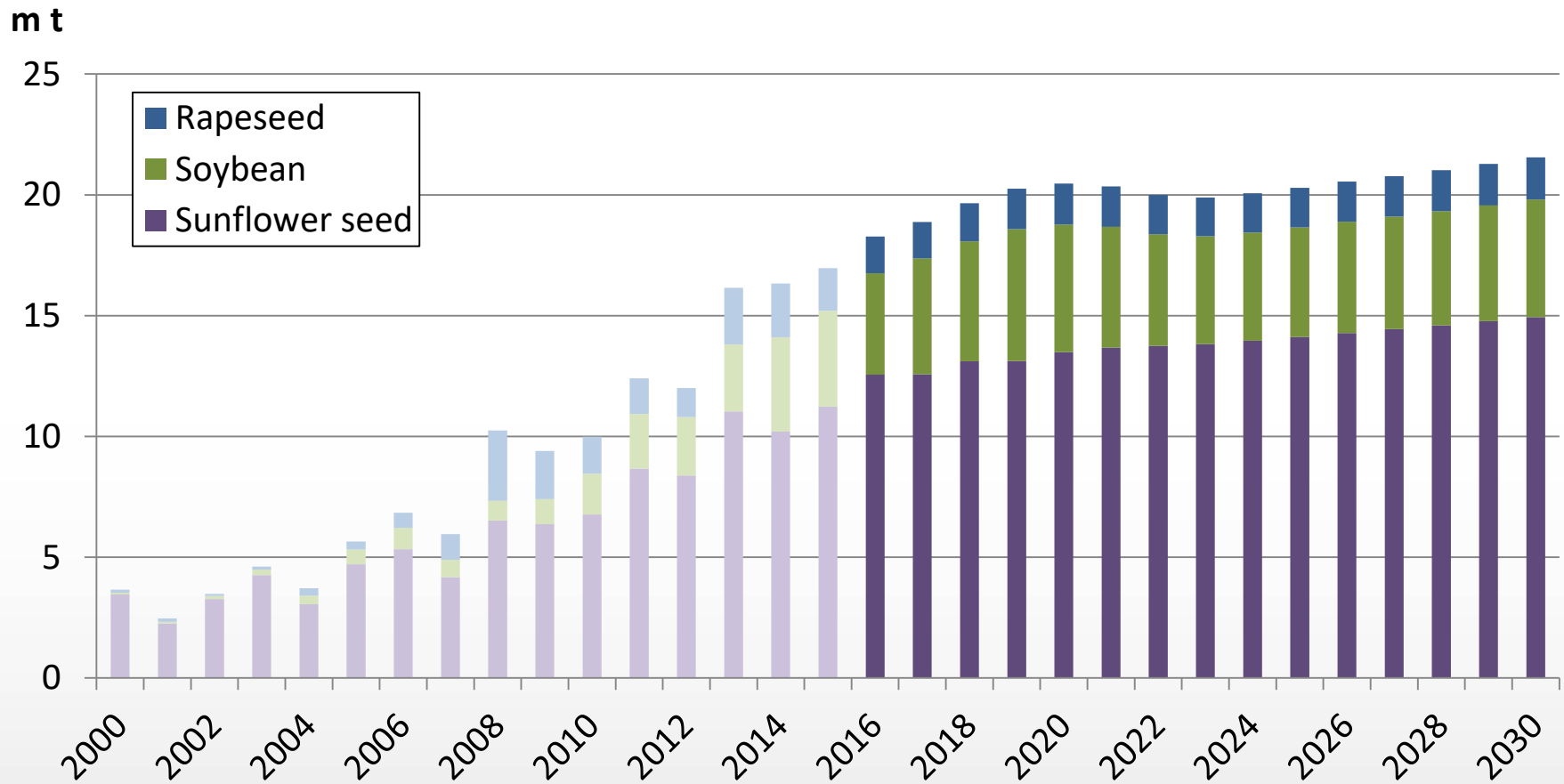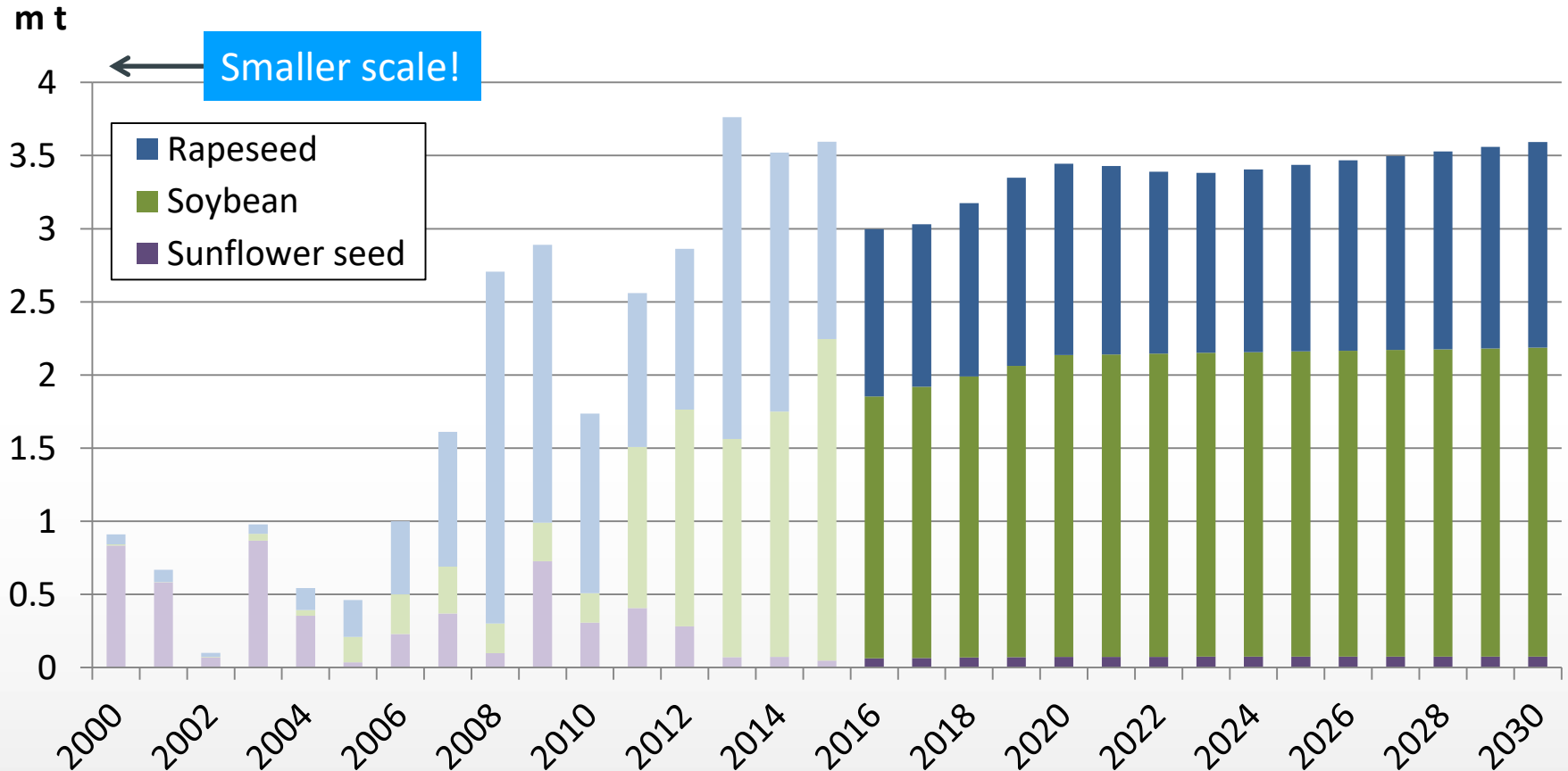- Volatility not captured

$\Rightarrow$ **Not a forecast!**

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Crop area

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Producer prices in nominal UAH

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Oilseed production

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Oilseed exports

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Grain production

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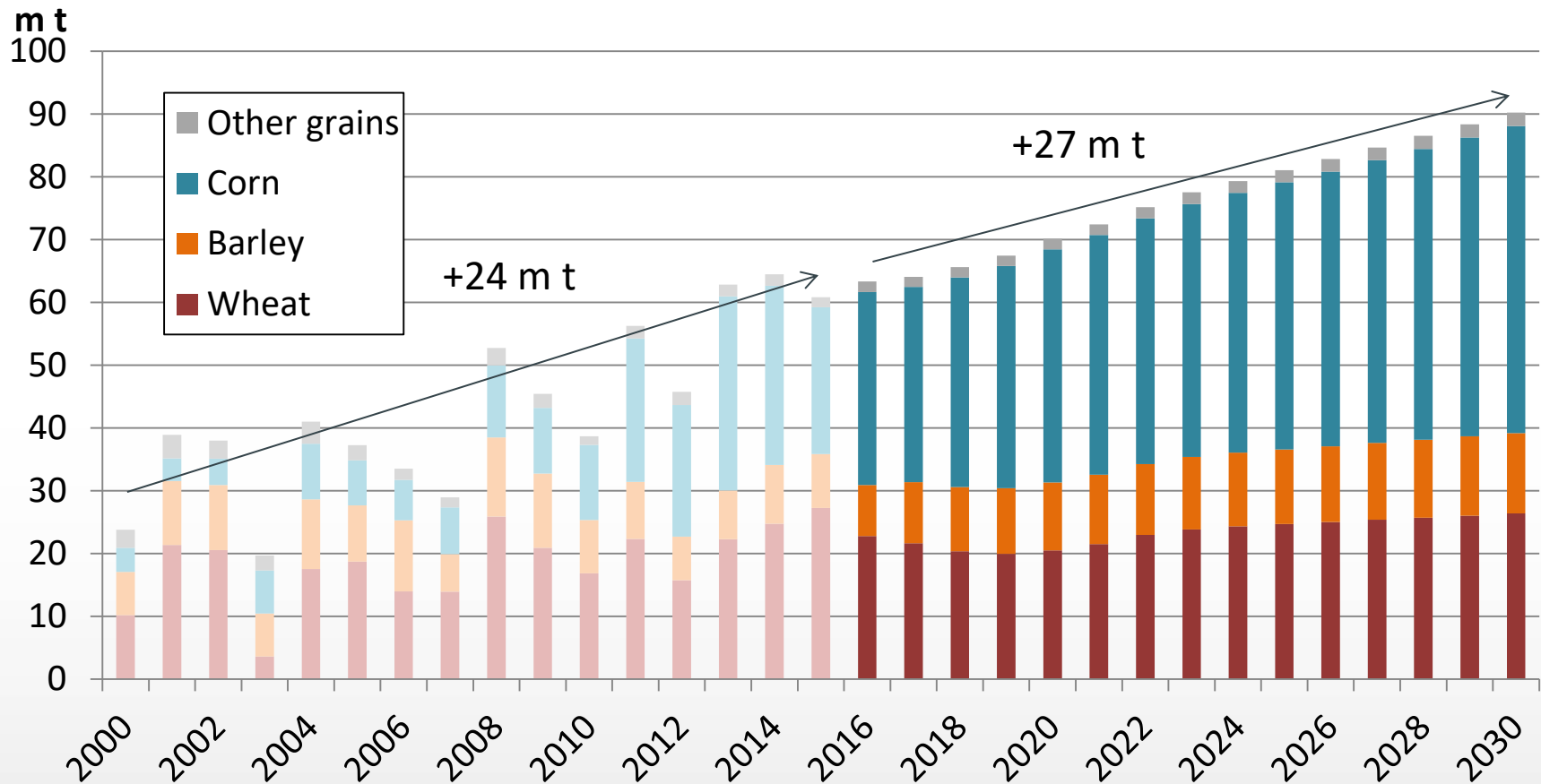
Grain consumption and exports

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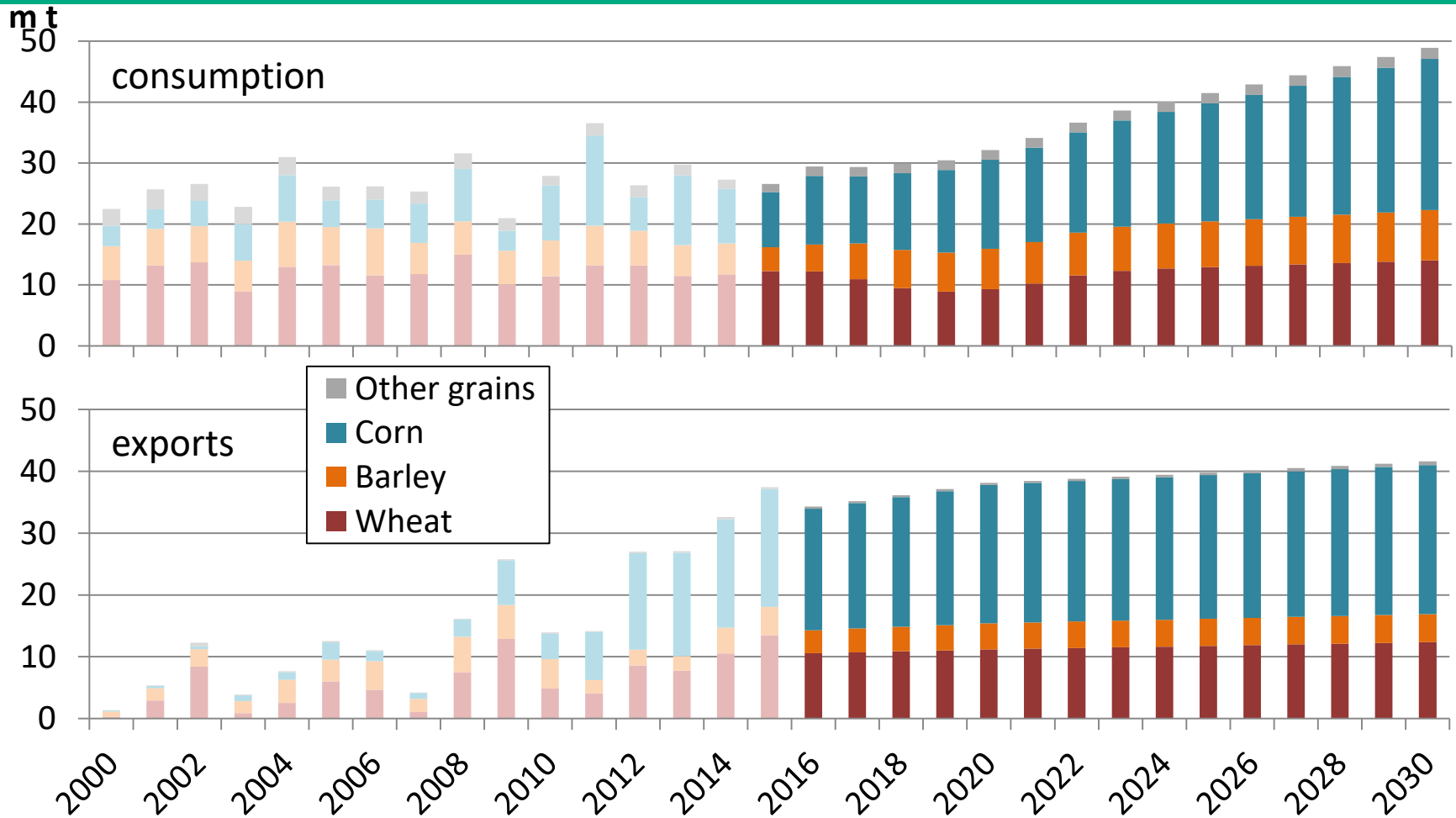
Comparison across studies: example corn and wheat

		Corn			Growth rate	Wheat			Growth rate
		2015	2020	2025	2015-2025	2015	2020	2025	2015-2025
Production	OECD	22.0	26.8	28.7	31%	26.4	25.8	29.3	11%
	USDA	23.0	28.7	33.2	44%	27.0	25.1	26.1	-3%
	AGMEMOD	23.4	37.1	42.6	82%	27.3	20.5	24.7	-9%
Net Exports	OECD	15.9	17.8	19.1	20%	14.5	12.7	15.6	8%
	USDA	15.0	16.2	18.7	25%	15.0	12.1	12.8	-14%
	AGMEMOD	19.0	22.3	23.2	22%	13.5	11.2	11.8	-13%
Consumption	OECD	8.5	9.0	9.6	13%	12.4	13.0	13.6	10%
	USDA	8.4	12.5	14.4	72%	12.5	13.0	13.2	6%
	AGMEMOD	9.1	14.6	19.4	114%	12.3	9.3	12.9	6%

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Conclusion

- **Continued production growth for grains**
- **Slow down of oilseed production growth**
- **Large exporter of grain and oilseeds**

    $\Rightarrow$ strong dependency on world market

- **Projections**

    - Based on specific assumptions

    - Improved modeling framework

    - Comparable to other outlooks

- **Next step: scenario analysis**

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Thank you for your attention!

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