

► Project *brief*

Thünen Institute of Market Analysis

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Upgrading the AGMEMOD model for the next CAP policy period

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- **The model's Baseline was updated for the years 2021 and 2022**
- **New 10-year AGMEMOD Baseline projections for 27 EU member states provided**
- **Table olives, olives for oil and olive oil were introduced as new sectors into the model for a broader coverage of commodities**
- **Expert workshop on modelling the new Common Agricultural Policy of the European Union (CAP) delivered valuable input for improving the model**
- **Detailed oilseed complex analysis for six EU member state countries conducted as a contribution to the MTO 2022 of the European Commission**
- **The update of two country models to reflect their final CAP strategic plans (CSPs) shows different market related effects of the new CAP**

Background and aims

On January 1st 2023, the new regulations of the CAP started (CAP 2023-2027). Besides other objectives, the new CAP aims to contribute to the ambitions of the EU's Farm to Fork (F2F) and Biodiversity strategies and is therefore expected to have a vital impact on the EU's agricultural sector.

New policy measures that are introduced under the new CAP need to be considered for agricultural market projections. Moreover, there is a need for policy impact assessment. In order to meet these needs, we extended AGMEMOD in the project "Support for AGMEMOD model, baseline and database updates 2021/2022".

The project is the most recent in a series of successive projects since 2015. The series seeks to continuously analyse the EU's agricultural sector and to provide projections for EU agricultural commodity markets at EU Member State level which are consistent with the medium-term outlook published annually by the EU Commission. Additionally, a specific focus is put upon selected sectors.

Approach

AGMEMOD is a dynamic, multi-product, partial equilibrium model for the EU at Member State level and provides 10-year outlook projections for the agricultural sectors for all EU Member States. Additionally, AGMEMOD covers the CAP policies and can quantify the effects of policy changes. During the course of the project, we updated the model database and the parameters used in model equations. Also, we introduced the olive complex distinguishing between table olives, olives for

oil, and olive oil. Further, we developed a methodology for the representation of the CSPs of the new CAP and applied it to the country models of Germany and the Netherlands. To validate the approach, we conducted different scenarios with a focus on comparing market developments under the new CAP with the old CAP until 2032.

Key findings

Within the project, we produced 10-year outlooks for the agricultural sectors at member state level with AGMEMOD and aligned to the EU Commission's medium-term outlooks (EC MTOs). Specifically, market projections for table olives, olives for oil and olive oil, as well as projections for the oilseed complex in selected EU Member States were published in special chapters of the EC MTOs in 2021 and 2022, respectively. The second part of the project mainly focused on assessing the market effects of the new CAP 2023-2027. A workshop in Brussels with policy and scientific stakeholders revealed that implementing the new CAP into agricultural models requires a profound understanding of the national CSPs. Besides the language barrier, the Member State specific, highly complex, point based and tier-based CSP types, pose huge challenges for modellers.

Therefore, we implemented the new CAP elements of the CSPs only for two countries, Germany and the Netherlands. We included the financial measures of coupled and decoupled support and the enhanced conditionality standard GAEC 8 on non-productive area together with fallow-land specific eco-schemes. Additionally, national policies aligned to the CAP and

the F2F strategy were implemented in the Netherlands effectively reducing the livestock production.

Land use changes

For Germany, the implementation of the GAEC 8 standard and the non-productive area eco-schemes increase fallow land. This increase is projected to go mainly at the expense of arable land other than fodder, leading to a slight decrease in grains and oilseeds. Additionally, protein crops are not applicable to meet the set-aside requirements under the enhanced conditionality in Germany, while under the old CAP the protein crop area has been significantly expanded to fulfil the greening obligation attributed to the ecological focus areas (EFAs). Consequently, the protein crop area is projected to decrease strongly to levels similar as prior to 2015 (Figure 1).

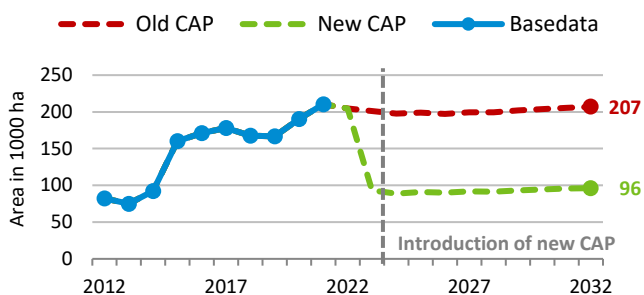


Figure 1 Protein crop area under old CAP and new CAP scenario in Germany, 2012-2032. Source: AGMEMOD simulation

The effects for the Netherlands are much greater in terms of land use change. Due to the national policies, the livestock sector is expected to extensify resulting in considerable land use change with increases in permanent grassland and fodder area. This results in decreases of other arable land (Figure 2) which are augmented due to additional requirements from the enhanced conditionality.

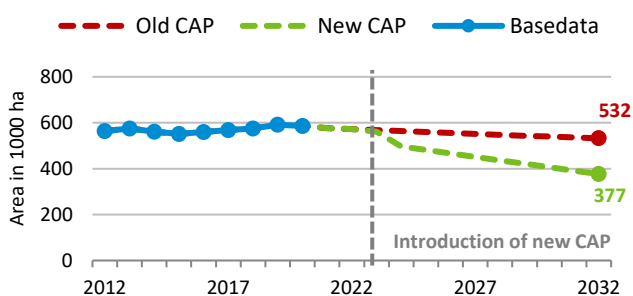


Figure 2 Land other than for fodder production under old CAP and new CAP scenario in the Netherlands, 2012-2032. Source: AGMEMOD simulation

Livestock sector

The German livestock sector in general is projected to be only hardly affected by the new CAP. The small reductions in

livestock numbers can be mainly attributed to the introduction of the conditionality rule GAEC 8, while the small increases for suckler cows, sheep and ewes can be attributed to the new coupled support schemes for these animal groups.

To counteract the tense situation of the Dutch livestock sector (nitrogen pollution etc.), the implementation of several buy-out schemes and other environmental restrictions as well as extensification strategies imposed on the Dutch animal sector are expected to lead to a drastic decline in the herd sizes of pigs (Figure 3), dairy cows and broiler numbers. As a consequence, also animal product numbers are projected to decline when comparing the new CAP with the old CAP.

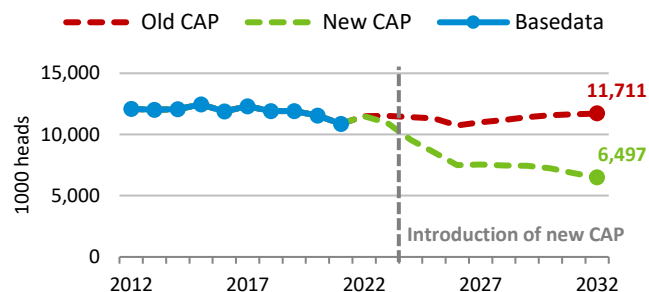


Figure 3 Fattening pigs herd size under old CAP and new CAP scenario in the Netherlands, 2012-2032. Source: AGMEMOD simulation

In addition, the simulated downward trend of the Dutch animal sector projects important declines in net exports in the case of pork meat, eggs and poultry meat. In Germany, the pork meat exports increase as a result of spill-over effects from the lacking exports of Dutch pork meat, while other net exports are projected to remain almost stable.

Commodity prices change between 0.1 % (whole milk price) to 7.8 % (protein crop price) for Germany and 0.3 % (cattle price) to 10.6 % (potato price) for the Netherlands when comparing the new CAP vs. the old CAP scenario in 2032. The effect on price changes would be stronger if the CSPs of all EU countries would have been modelled.

Conclusion

As part of the project, we extended the AGMEMOD model to include further commodities and made it fit for the simulation of the new CAP 2023-2027. This was realised by updating the AGMEMOD Baseline and developing a methodology to incorporate the national CSPs. However, the introduction of the national CSPs were only realized for Germany and the Netherlands and focused on the main policy elements having a market impact. Nevertheless, the analysis showed the importance of a national approach as the effects are very specific per country. Consequently, further research can focus on the implementation for all EU countries and the representation of additional policy elements which might have a market impact, e.g. other eco-schemes.

Further Information

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Partners

² Wageningen Economic Research

Duration

11.2021-02.2023

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2436

Publications

Contribution to the EU Commission's medium-term outlook (MTO):
 EU agricultural outlook for markets, income and environment (2021, 2022)

https://agriculture.ec.europa.eu/data-and-analysis/markets/outlook/medium-term_en

Support

