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COVID-19 and Agriculture: Market Impacts Over the Medium Term

Marcel Adenäuer, Annelies Deuss, Armelle Elasri, Clara Frezal, Hubertus Gay, and Claude Nenert

Selected presentation for the International Agricultural Trade Research Consortium's (IATRC's) 2020 Annual Meeting: Economic Implications of COVID-19, December 14-15, 2020, Virtual platform.

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COVID-19 AND AGRICULTURE: MARKET IMPACTS OVER THE MEDIUM TERM

Marcel ADENÄUER, **Annelies DEUSS**, Armelle ELASRI,
Clara FREZAL, Hubertus GAY, Claude NENERT

Trade and Agriculture Directorate
OECD

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Introduction

- How will agricultural markets be affected by the COVID-19 pandemic over the next decade?
 - Impacts are transmitted throughout the entire food system
 - Following initial reports of disrupted supply chains, these have proven to be resilient
 - Consequently the focus is on the demand impact due to lower economic growth
- Scenario analysis using the OECD-FAO Aglink-Cosimo model examining two possible economic recovery paths



Methodology: The Aglink-Cosimo Model

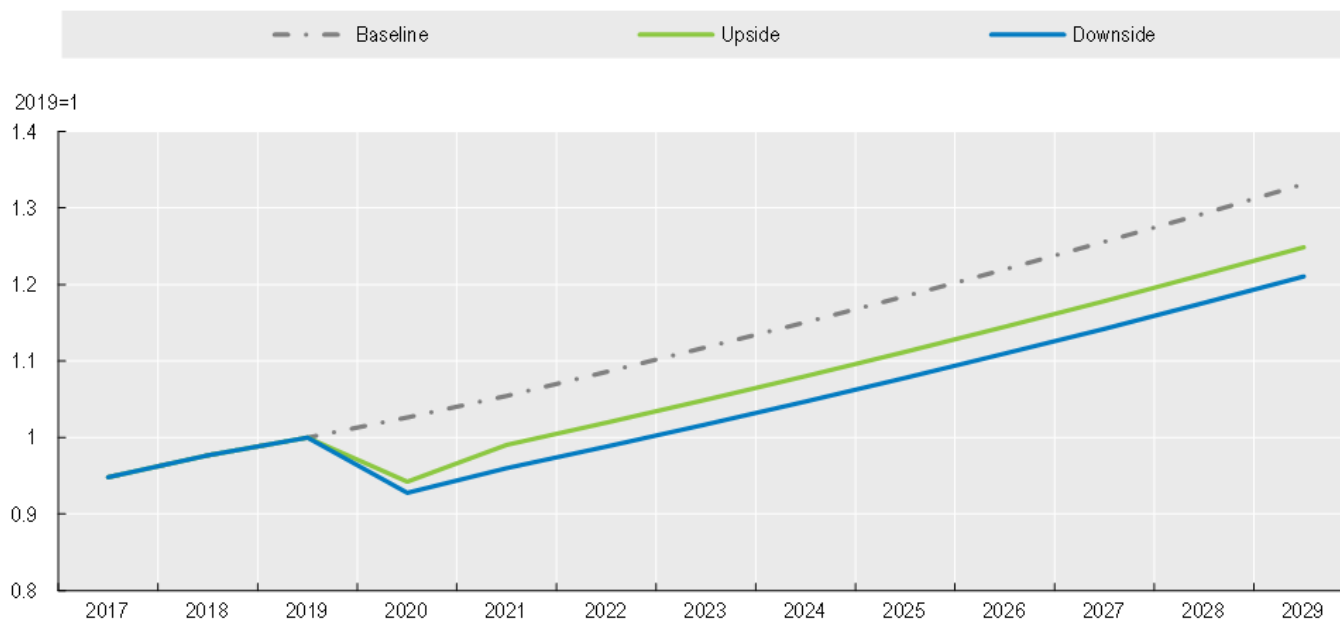
- Aglink-Cosimo: an economic model of world agriculture managed by the Secretariats of the OECD and FAO
- Aglink-Cosimo is
 - recursive-dynamic (up to 2030)
 - partial equilibrium (Agriculture + Biofuels)
 - used to simulate developments of annual market balances and prices for the main agricultural commodities produced, consumed and traded worldwide.
 - used in the production process of the OECD-FAO Agricultural Outlook and policy scenarios



Scenario description

Two possible pathways for the evolution of the global economy:

- **An upside scenario:** Successful vaccination campaigns, efficient government policies and better co-operation between countries are assumed to **boost** economic recovery.
- **A downside scenario:** Delays to vaccination deployment and difficulties controlling new virus outbreaks are assumed to **weaken** economic recovery.

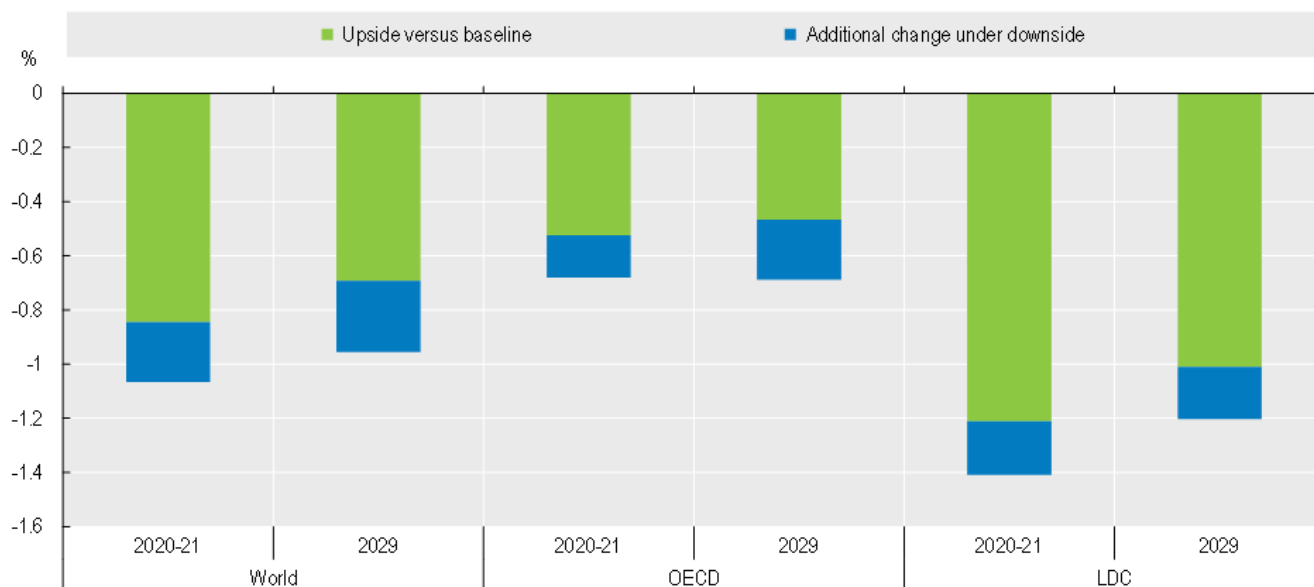


Evolution of global GDP index under baseline, upside and downside scenarios (constant 2019 USD)



Impact on calorie demand

- Lower economic growth reduces gross calorie demand per capita by about 1%
- Larger impact in least developed countries (LDCs) than in OECD countries, due to larger share of food spending

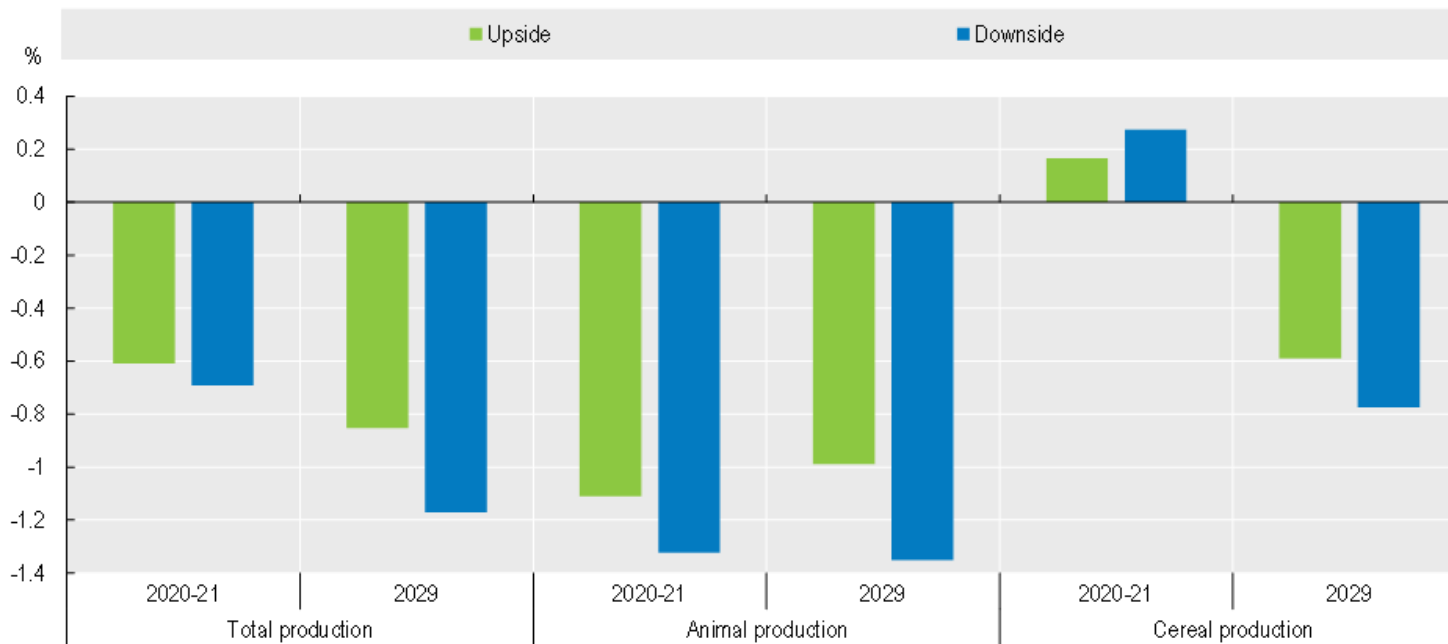


Change in gross calorie demand under upside and downside scenarios compared to the baseline in World, OECD and LDC countries, 2020-21 and 2029



Impact on agricultural production

- Lower consumer demand and subsequent price decreases lead to a reduction in agricultural production
- Animal production to decline more than cereal production due to a relatively larger drop in demand for high-value products

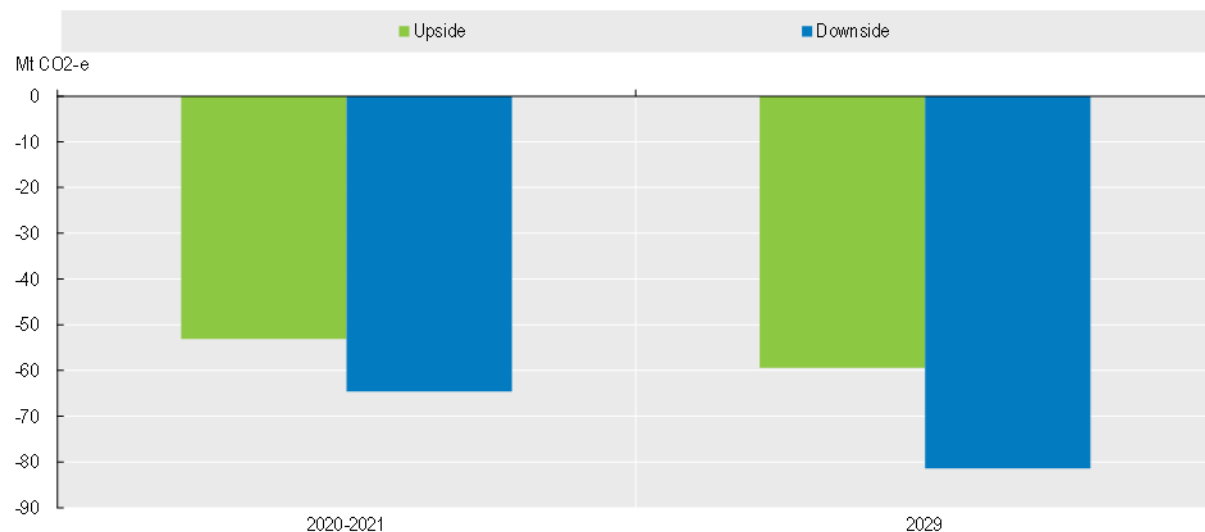


Change in total, animal and cereal production under upside and downside scenarios compared to the baseline, 2020-21 and 2029



Impact on greenhouse gas (GHG) emissions

- Decline in agricultural production is expected to lead to reduction in GHG emissions from agriculture
- Due to compositional change in agricultural production, GHG emissions from agriculture to fall at higher rate than production

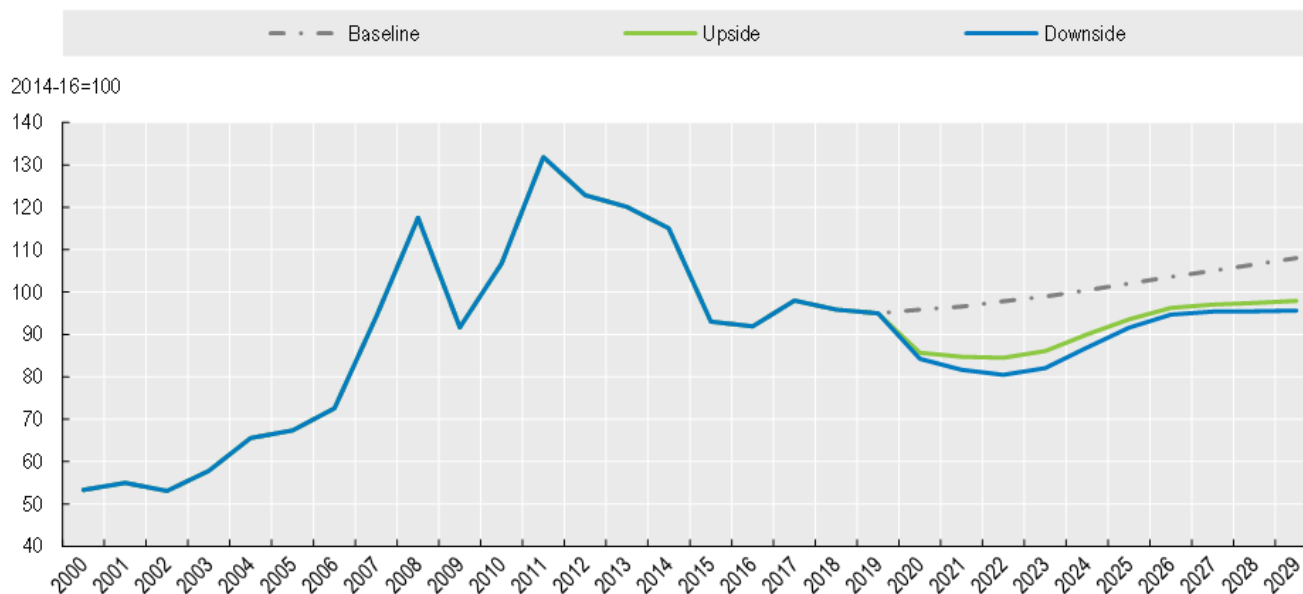


Absolute change in agricultural GHG emissions under upside and downside scenarios compared to the baseline, 2020-21 and 2029



Impacts on agricultural prices

- Agricultural prices are projected to fall in the short term due to oversupply of agricultural commodities
- After 2022, commodity prices are projected to gradually recover but they are not expected to return to baseline levels.

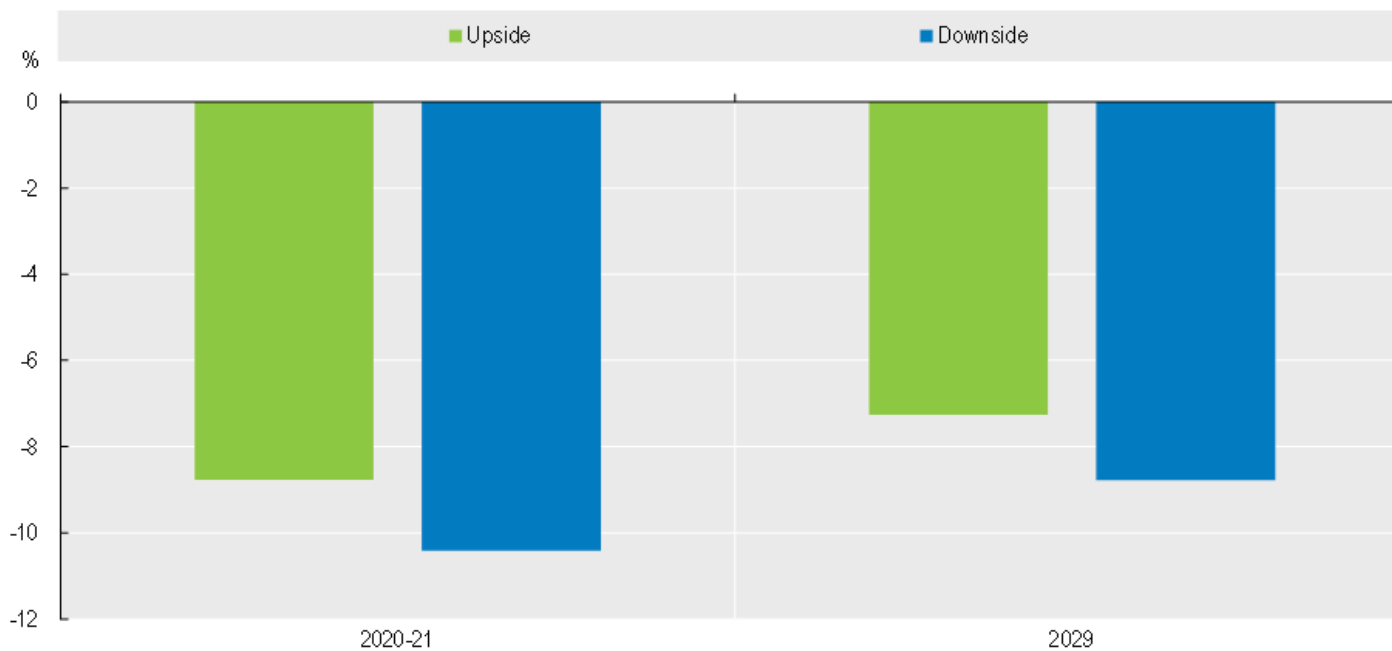


Evolution of the FAO food price index under baseline, upside and downside scenarios



Impact on farm revenues

- Decline in agricultural prices expected to put downward pressure on farm revenues

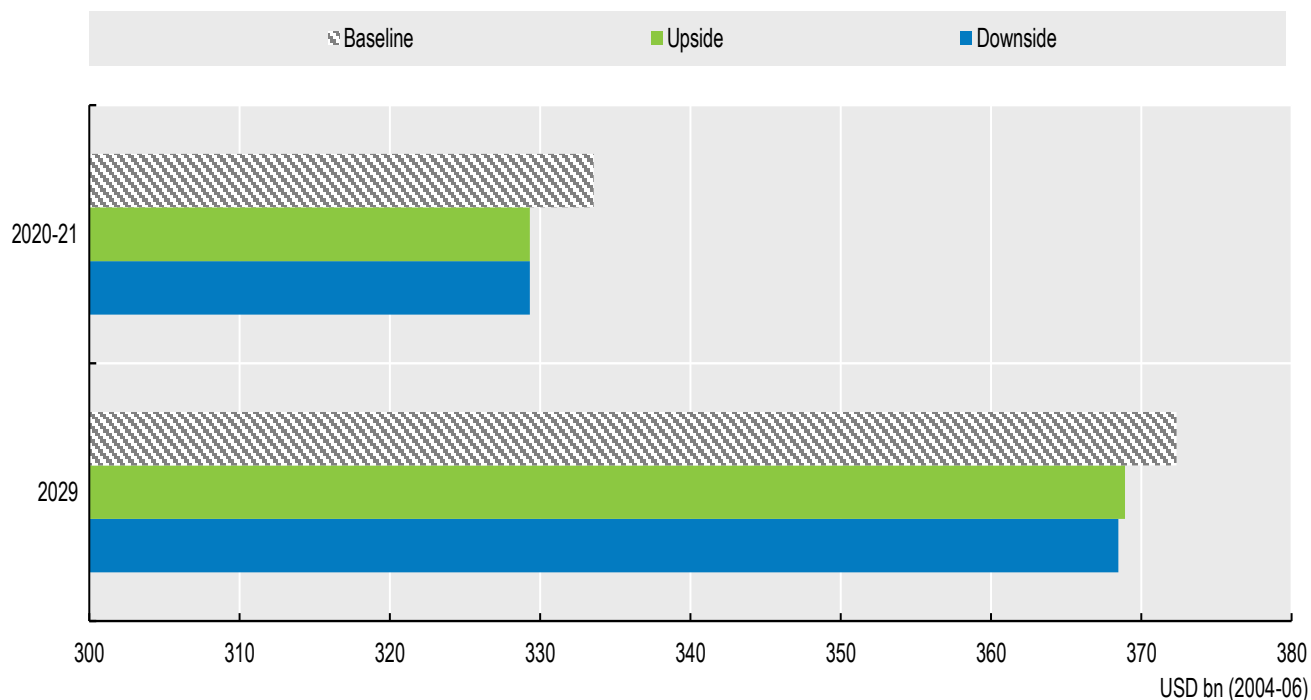


Change in agricultural revenues under the upside and downside scenarios compared to the baseline, 2020-21 and 2029



Impact on agricultural exports

- Global agricultural exports in 2020-21 are projected to drop by over 1% in USD value terms compared to the baseline.



Agricultural exports in constant 2004-06 value under baseline, upside and downside scenarios, 2020-21 and 2029



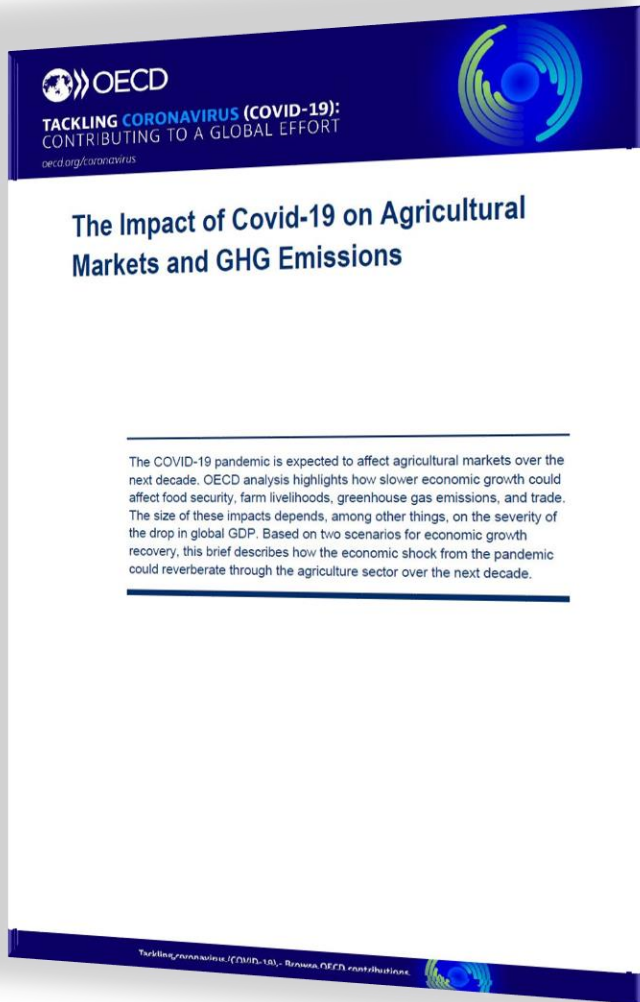
Summary of results

Impact of slower economic growth on agricultural markets:

- Falling incomes lead to a contraction in food consumption, and these impacts are larger in LDCs
- Decreased consumer demand puts downward pressure on agricultural prices and production
- Changing agricultural production reduces the emission intensity of the sector
- Agricultural prices gradually recover, after a fall in prices due to oversupply in the short run
- Lower agricultural prices will put downward pressure on agricultural revenues
- Agricultural exports slow down as a result of the pandemic



More information



Download the full policy brief and other OECD policy briefs on COVID-19:

<https://www.oecd.org/coronavirus/en/>



THANK YOU

For questions or inquiries:

Annelies.Deuss@oecd.org

Hubertus.Gay@oecd.org