

# The Institution of Agricultural Engineers



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# About CEMA – European Agricultural Machinery Association



cema-agri.org



**.AGORIA**



**Danish Agro Industry**

Member of Danish Agriculture & Food Council



CEMA is the association representing the European agricultural machinery industry. With **11 national member associations**, the CEMA network represents both large multinational companies and numerous European SMEs active in the sector.

CEMA represents about **1,300 manufacturers**, producing more than 450 different types of machines with an annual turnover of about €40 billion and 150,000 direct employees.

CEMA companies produce a large range of machines that cover any activity in the field from seeding to harvesting, as well as equipment for livestock management.



**METALTECHNOLOGY AUSTRIA**



POLSKA IZBA GOSPODARCZA  
MASZYN I URZĄDZEN ROLNICZYCH



**TARMAKBİR**

The Turkish Association of Agricultural  
Machinery and Equipment Manufacturers

# Key themes for farming



**Innovation:**  
Modernizing tools  
and practices to  
improve efficiency.



**Sustainability:**  
Balancing  
environmental,  
economic, and  
social needs.



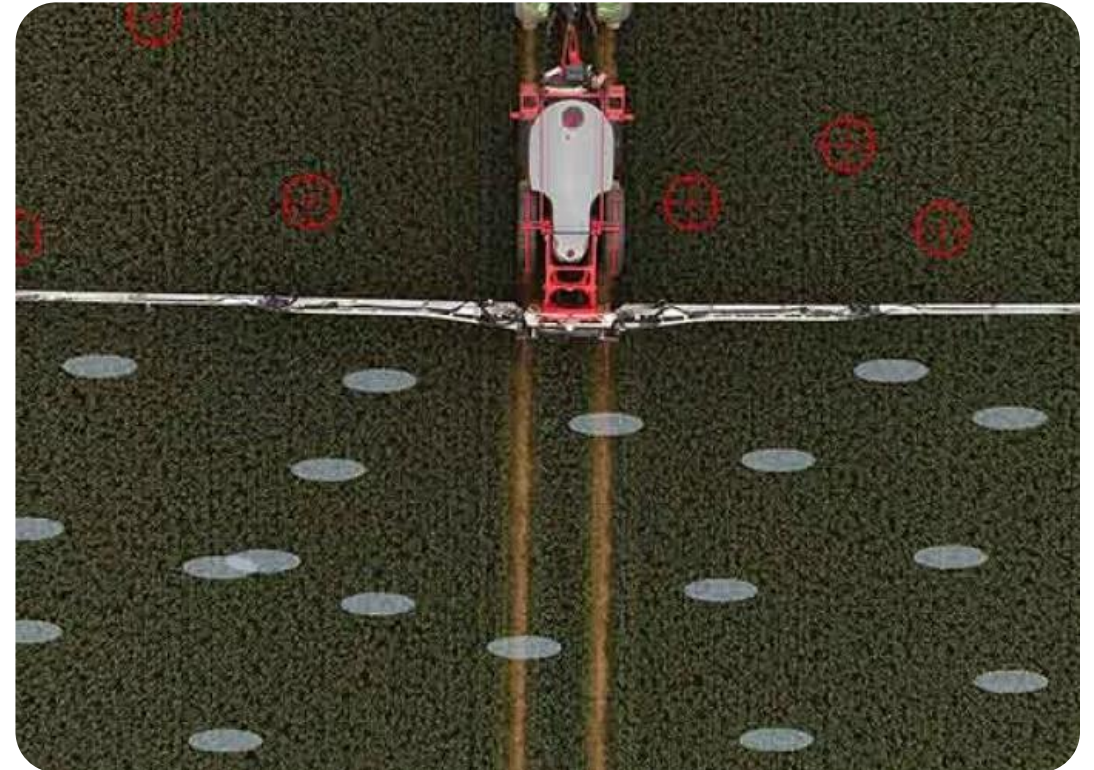
**Freedom to Farm:**  
Ensuring autonomy  
and flexibility for  
farmers in  
decision-making.



# Innovation: Addressing Key Challenges



- Introduction of advanced machinery to reduce labour dependency.
- Precision agriculture: Optimizing inputs (water, fertilizers, pesticides) to minimize waste.
- Cost-saving technologies: Increasing farm profitability through reduced operational expenses.
- Attracting younger generations: Simplifying farm operations to make farming more appealing.



# Sustainability: Beyond Environmental Impact



- **Environmental:** Reduced resource consumption through technology (e.g., precision farming).
- **Economic:** Profitable farms ensure long-term viability and market competitiveness.
- **Social:** Supporting rural communities and promoting generational farming.
- **Aim:** Balance sustainability with productivity for holistic long-term outcomes.

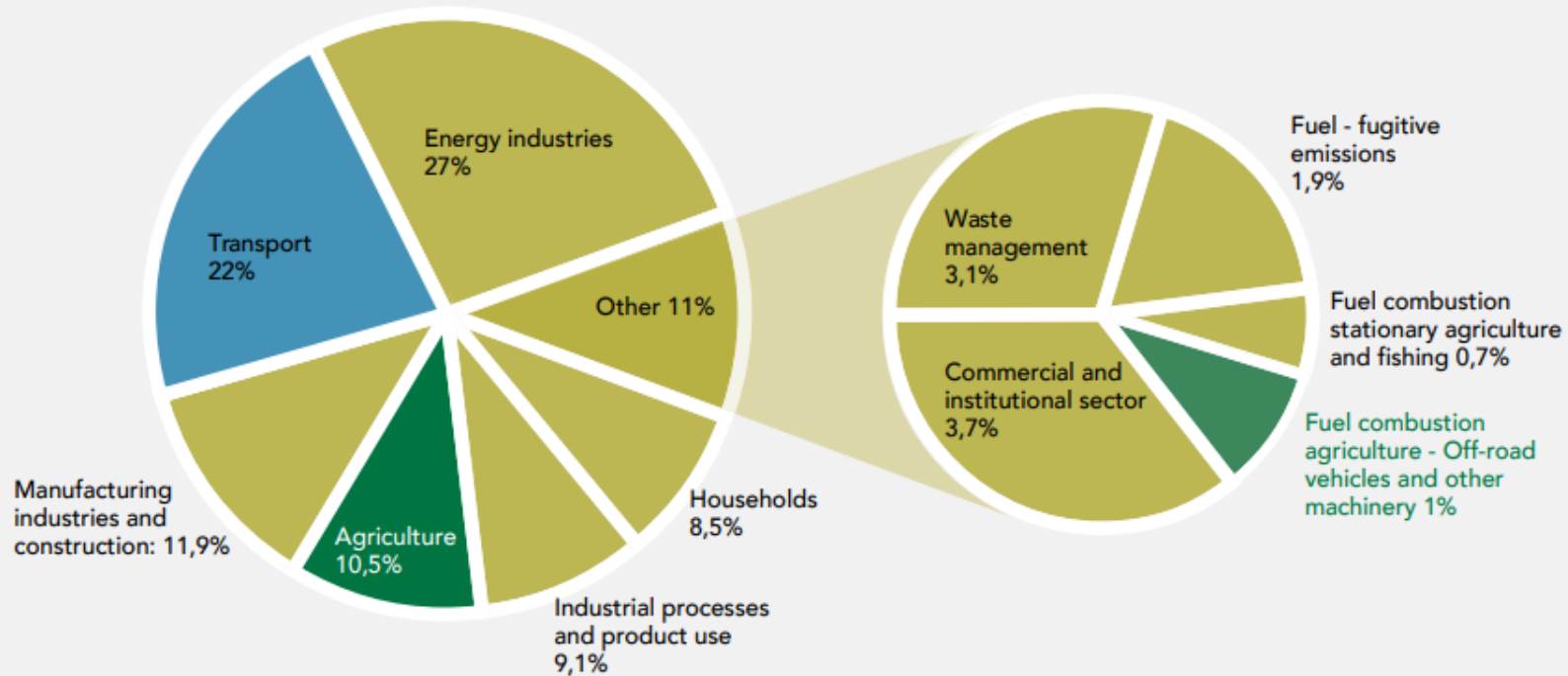


# Greenhouse emissions agriculture



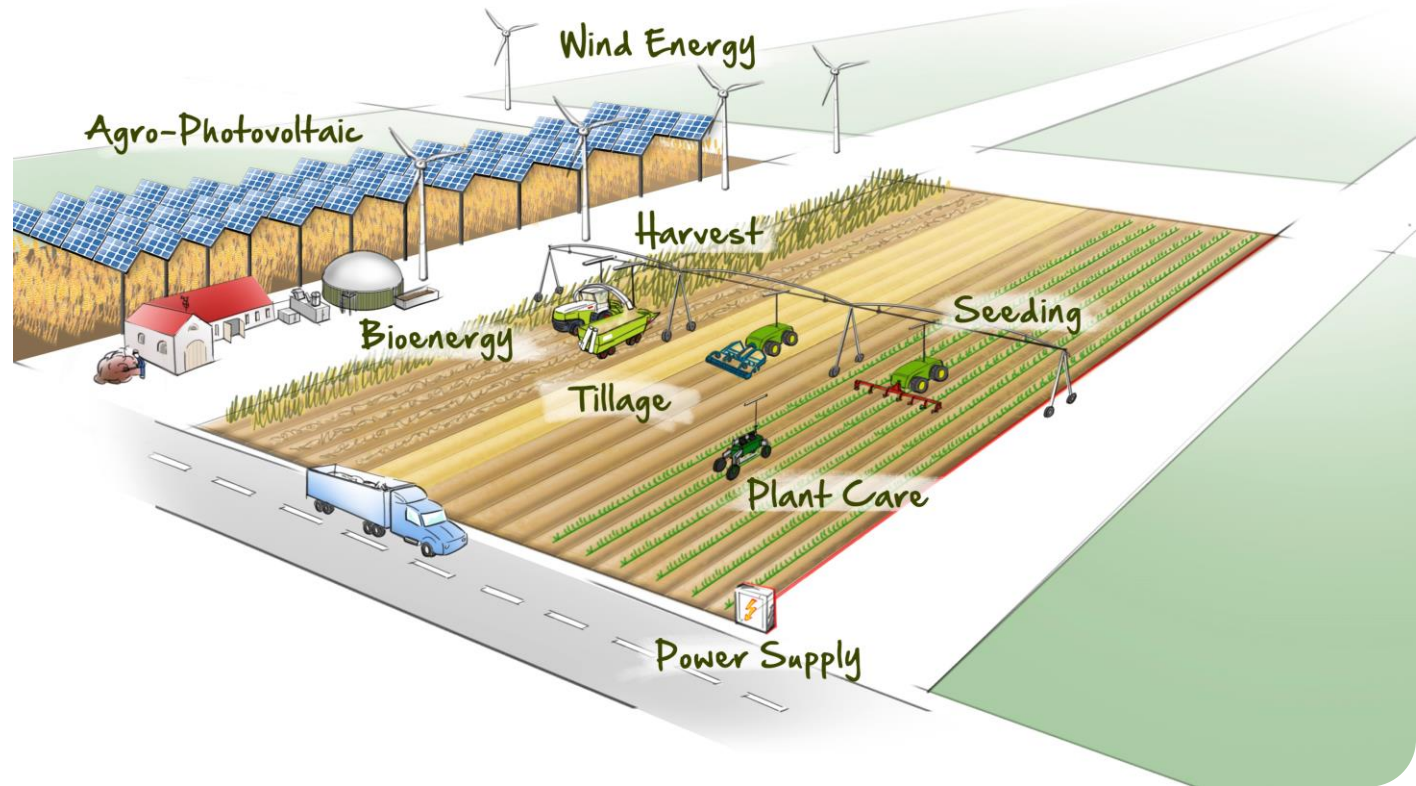
- Machinery emissions are just one percent of greenhouse gas emissions

Figure 1.  
Share of total GHG emissions [CO<sub>2</sub>eq] of the different sectors



# How to lower greenhouse emissions?

- It's new farming practises
- On-farm energy production
- Different plant care and seeding practises
- Adjusted soil working practises
- And so on....



# Empowering sustainable farming: electrification



- Electrification of smaller machines can be a solution farmers favour in certain circumstances





# Empowering sustainable farming: low carbon fuels



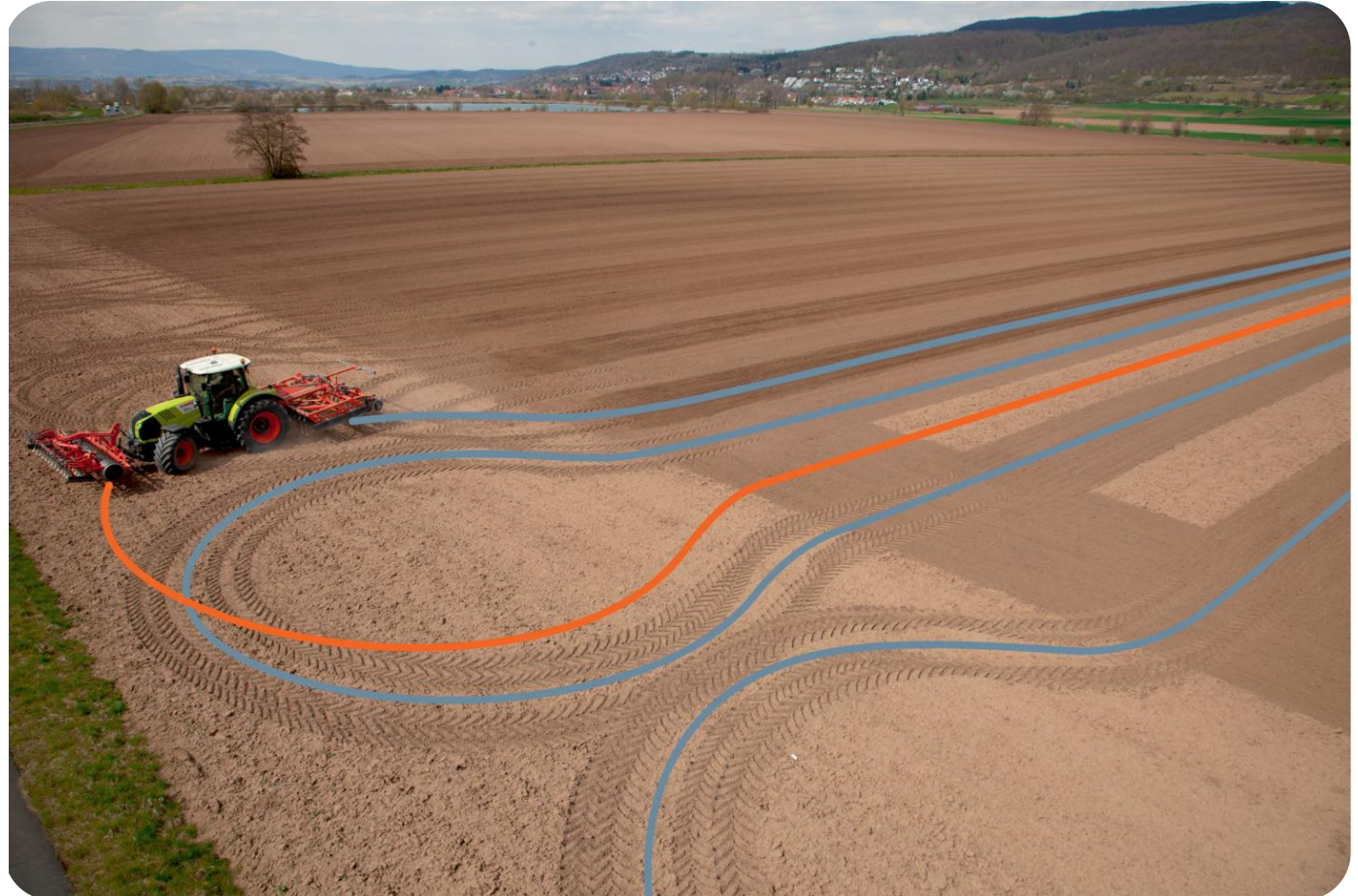
- Production of fuels on farms:
- Biomethane, biodiesel, and others
- Production of fuels delivered to farms:
- Hydrogen, synthetic fuels, and others



# Precision farming: data makes perfect



- Ever more and better readable data leads to:
- higher yields
- less use of plant protection products
- less use of chemical fertilizers
- autonomous driving so reduction of working hours and thereby cost reduction and better work-life balance
- better traceability of food production



# Data: all will become integrated



- Integration of data and usability of data is still a challenge
- Machines are digitally connected to each other, and more and more with partners off farm
- CEMA is working connectivity with the Agricultural Industry Electronics Foundation
- CEMA is working with the European Commission, universities and our member companies on agri data hubs and agri data spaces
- Goal: to connect machines and all beyond and enable farmers to make fact base decisions



# Empowering Farmers: Freedom to Farm



- Importance of autonomy in farming decisions.
- Over-regulation limits flexibility and innovation.
- Need for a regulatory environment that supports farming diversity, innovation, and sustainability.
- Legislative stability is critical for planning and investment in the future.

# The Path Forward for European Farming



- Our future success depends on the integration of innovation, sustainability, and freedom to farm.
- There is a need for continuous collaboration between stakeholders in agriculture.
- **CEMA** will continue to advocate for farmer-focused solutions, technological investment, and balanced regulation.



# Thank you for your attention

[cema-agri.org](http://cema-agri.org)

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European Agricultural  
Machinery Association

