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of Life Sciences
and Technologies



Reply from Central-Eastern European perspective

Latvia, Lithuania, Poland

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WEBINAR Climate Care Cattle farming, 16th of April 2021





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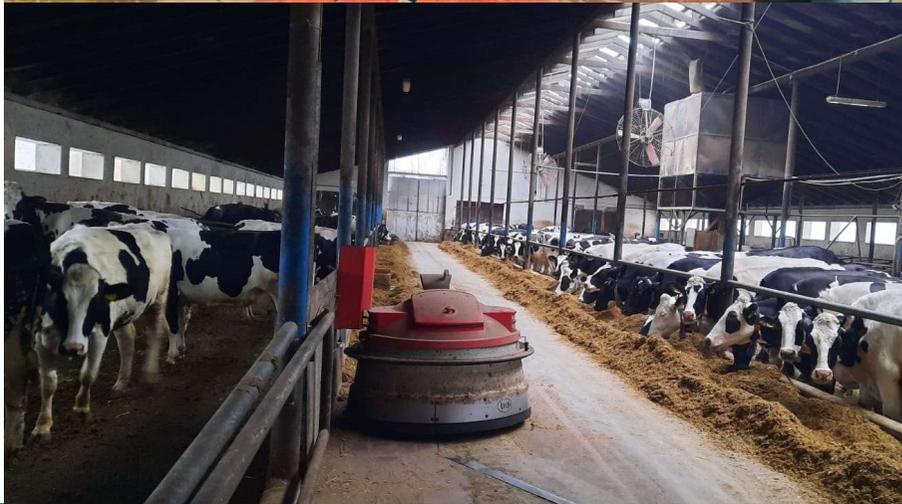
How our farms look like?





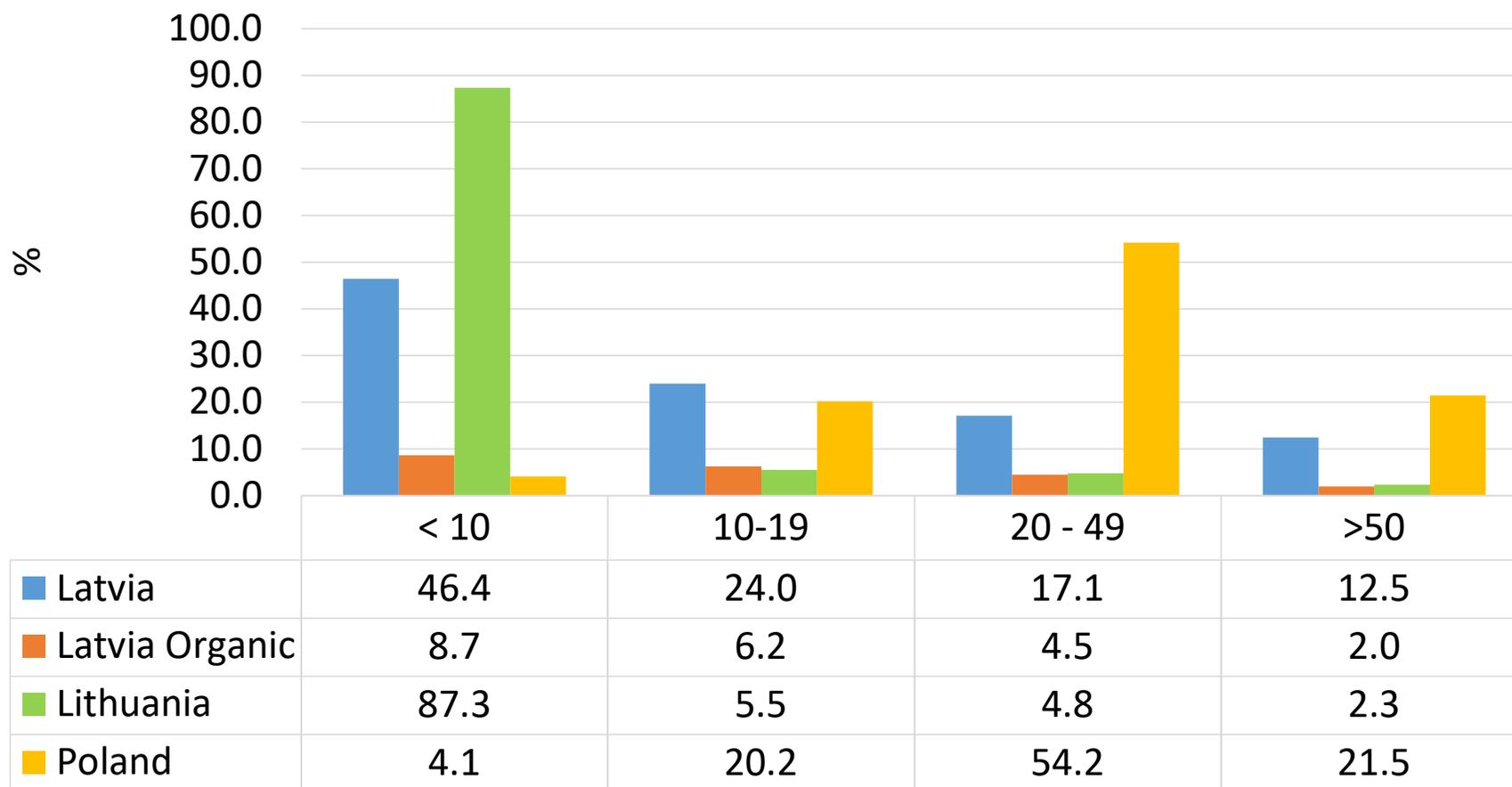
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How our farms look like?





Structure of dairy farms, by average cows number in farm





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Ammonia and Green House Gas emissions



- Odors in the farm environment
 - Investment related to reducing odors
 - Manure management (weather condition, decreasing time of implementation)
 - Mandatory related with odors and nitrogen fertilisers using

- GHG emissions and C footprint from farms
 - theoretically



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Ammonia and Green House Gas emissions Researcher activities



- Improvement of the accounting system for greenhouse gas (GHG) emissions and carbon dioxide (CO₂) capture from arable land and perennial grassland management and development of appropriate methodological solutions (Latvia)
- The role of biologically active substances of Paulownia CLON IN VITRO in the methanogenesis and biohydrogenation regulation in ruminants (Poland)
- Alfalfa saponins – from microorganisms to environmental protection (Poland)
- Determination of greenhouse gas emissions during feed production and in the gastrointestinal tract of cattle (Lithuania)



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Ammonia and Green House Gas emissions Researcher activities



- Feed nutrient conversion and optimal crude protein level in dairy cows to reduce environmental contamination level (Latvia)
- Reducing nitrogen loss from livestock production by promoting the use of slurry acidification techniques in the Baltic Sea Region (Lithuania, Latvia, Poland - Baltic Slurry Acidification)
- Introduction of technologies for preserving nitrogen released from slurry on cattle and pig farms (Lithuania)
- Large scale methane measurements on individual ruminants for genetic evaluations (Lithuania)
- Forecast of agricultural indicators and GHG emissions from the agricultural sector in 2020, 2030, 2050 years and additional measures to reduce emissions (Latvia)



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Ammonia and Green House Gas emissions



Legislation

- GHG emissions capture from arable land and perennial grassland
- Effectiveness of Nitrogen use
- Carbon sequestration in soils





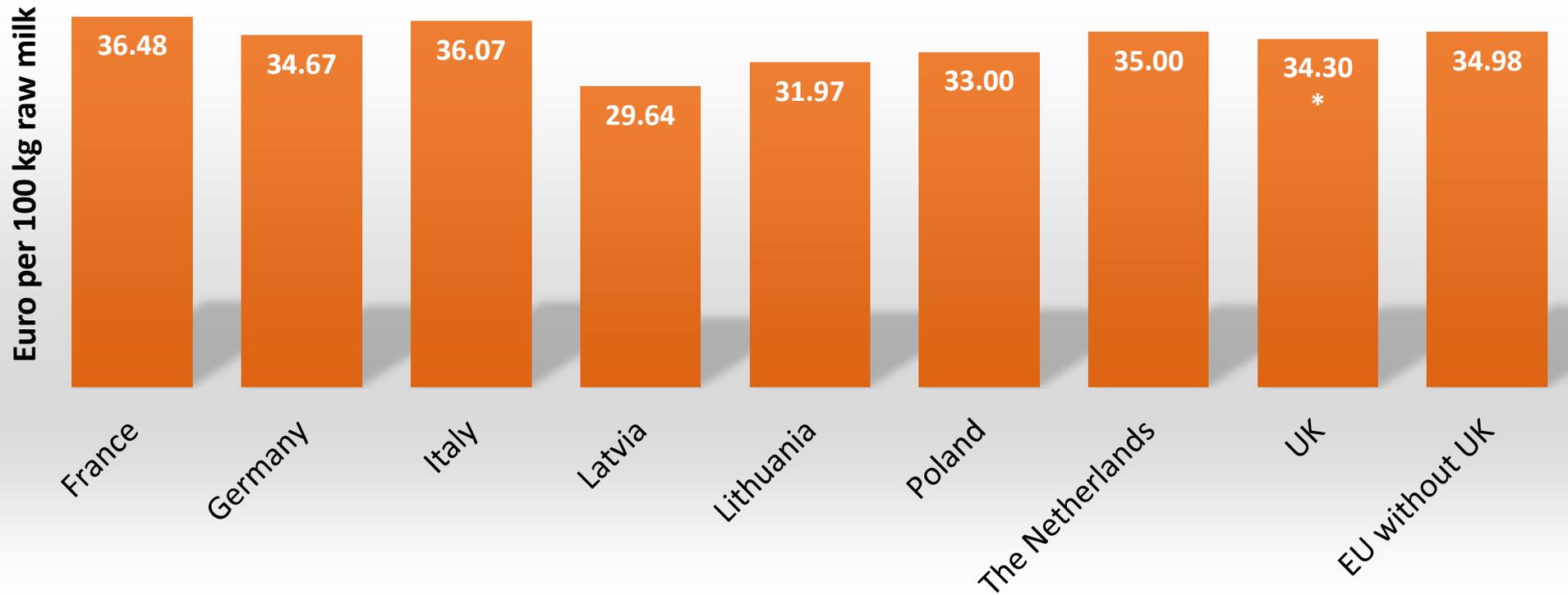
Farmers point of view



- Farmers are aware of their contribution to climate changes,
✓ but they point out that their role is overestimated
- Farmers are ready to introduce climate-friendly technologies in their farms,
✓ but they need support



Financial support



Sources: https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/eu-raw-milk-prices_en.pdf, **February 2021**

* **UK price** - https://www.clal.it/en/index.php?section=latte_uk, **2020, price for 100 Lt raw milk**



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Experience



- Positive examples of climate - friendly technologies
- Field days to exchange experience among farmers
- Cooperation among farmers
- Solar panels, since they notice economic benefits (reduced energy bills) apart from protecting the climate. Right now solar panels are becoming more and more popular in Poland



Knowledge's



- The most important source of information for the farmers are agriculture and/or feed company advisors
- Results and explanation of scientific research
- Information about technologies with additional explanation from environmental protection point of view
- Educated and independent advisors are needed





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Information for society



Science News from research organizations

Biggest carbon dioxide drop: Real-time data show COVID-19's massive impact on global emissions

Date: October 14, 2020
Source: Potsdam Institute for Climate Impact Research (PIK)
Summary: While the ongoing coronavirus pandemic continues to threaten millions of lives around the world, the first half of 2020 saw an unprecedented decline in carbon dioxide emissions – larger than during the financial crisis of 2008, the oil crisis of the 1979, or even World War II.

These are the most climate-damaging foods




Climate change researchers fly more than other academics, study finds




UN Photo/Manuel Elias



The Paris Agreement

Paris Agreement: essential elements

The Paris Agreement builds upon the Convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.



Representative Alexandria Ocasio-Cortez, a Democrat from New York, speaks as Senator Ed Markey, a Democrat from Massachusetts, right, listens during a news conference announcing Green New Deal legislation in Washington in February. (M. Drew/Blomberg via Getty Images)



Green deal From farm to fork



Pesticides in agriculture contributes to pollution of soil, water and air.

reduce the use and risk of chemical and more hazardous pesticides by 50%



The **excess of nutrients** in the environment is a major source of air, soil and water pollution, negatively impacting biodiversity and climate.

reduce nutrient losses by at least 50%, while ensuring no deterioration on soil fertility

reduce fertilizer use by at least 20%



Antimicrobial resistance linked to the use of antimicrobials in animal and human health

reduce the sale of antimicrobials for farmed animals and in aquaculture by 50%



Organic farming is an environmentally-friendly practice that needs to be further developed.

EU's organic farming sector to grow, with the goal of **25 % of total farmland being used for organic farming by 2030**



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- Thank you!