

# Potential of Bioeconomy for Agriculture – Agricultural systems in the COVID-19 era

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Will discuss first at a general level, and then close with some comments focusing on how COVID-19 could affect impact on general relations

# The bioeconomy

- Bioeconomy not a trend, a disruptive process with across society impacts
- Increased knowledge intensity in solutions to global challenges
- Biomass utilization
- Re-balancing relationships between human societies and nature

Implies a repositioning of agriculture in the economy and society: agriculture is no longer the traditional/“backward” sector *vis a vis* industry (manufacturing) as the sector of progress

# Effects at three levels

- Macro level
- Meso effects
- Micro effects

## At the macro level:

- Changing role for natural resources (and agriculture) in the economy and society.
- Changing relative prices and cascading technologies promote and result in new forms of integration of food-feed-materials-energy production processes, in a circular economy context (improving environmental impacts).

At the meso level: the organization of space and urban-rural relations

- “Biomass does not travel well”
- Biomass based industry more flexible to scale than fossil based industry.
- A repositioning of rural areas within the new value chains.

# At the micro level: bioeconomy as driver of innovation and investment processes

- Acceleration of product, process and business model obsolescence
- Added value in the traditional value chains (new products, use of waste and residues)
- Innovation opportunities across markets, investments and new job creation, particularly in rural areas
- In many countries needs to be reflected in infrastructural investments

# How does COVID-19 affect these tendencies?

- Too early to tell,
- Longer term, strengthening of the fundamentals of the demands for change (safer products, cleaner production, biotechnology, Green Deal..... ); short/medium, balanced for fiscal consequences (stretching obsolescence, lower public investments, R&D?)
- Not so much whether or not bioeconomy, but how to face the challenges for speeding-up / smooth? transition from conventional to bioeconomy based institutional and policy decision making frameworks (human resources, product and technology development structures)
- A key issue here is about the industrial organization of bioeconomy systems: it is essential to understand it to build the transition process

Thank you