



EU-China

FAB Task Force

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Report session on Agri-residues

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Three questions...

1. Common challenges (EU-China)
2. How R&I can address them
3. Best way of jointly tackling these challenges/expected output



Overview of challenges from the EU and China

General challenges

- a. Climate change** risk (GHG, ammonia, methane)
- b. External dependence** (fossil resources, fertilisers)
- c. Increase of resource efficiency**, promotion of **circular economy**
- d. High meat consumption** (changing diets)
- e. High cost** of technologies
- f. Development of (technical) standards**
- g. Knowledge exchange and capacity building**
(R&I networks, guidelines, handbooks, workshop)



Overview of challenges from the EU and China

Specific challenges

- a. Environmental impacts of animal manure** (e.g. pollution, soil degradation)
- b. Manure management** (reduction of (GHG) emissions and odours, prevention of leakage of toxic compounds)
- c. Biofertiliser production** from biogas digestate (replacement of mineral (fossil based) fertiliser)
- d.** Monitoring and optimised operation of biogas plants
- e. Integration of animal and crop production**
- f. Minimising waste and maximising value** of products
- g.** Full value chains for agri-waste, optimised logistics
- h.** Digitalised models for mass/energy flow of agri-residues



How R&I can address these challenges

- 1. EU China Protocol for resource efficient agriculture** (waste minimisation and valorisation) (CSA)
 - 2. Mixed farming systems**, integration of crop and animal production systems on smaller scale (food, feed, energy), green circular low carbon systems
 - 3. Generation of high value products from residues** (e.g. biochemicals, bioplastics, ethanol, butanol)
- Nutrient modelling (EOS), digitalised nutrient flows and recovery, contribution to precision agriculture
 - Clean agri-residues combustion systems for heating (small rural systems)



Best way of jointly tackling these challenges

- a. Creation of **networks for knowledge exchange**
- b. **Balanced involvement** of Chinese and European researchers
- c. **Multi-actor projects** (farmers, SMEs, researchers)
- d. Encouragement of **exchange of researchers**
- e. **Workshops and joint publications** (e.g. special issues in peer-reviewed journals)



Expected impact

- a. Mitigation of **climate change**
- b. Mitigation of **environmental hazards**
- c. **Rural development** and increase of farmers' income
- d. Reduction of **import dependence** (fossil resources)
- e. Improvement of **resource efficiency** of agricultural systems (value creation for agri-residues)
- f. Development of **innovative & cost-competitive technologies**
- g. Enhancement of **entrepreneurial innovation**





Thanks!

谢谢!