EU-China
FAB Task Force
26/03/2019

Report session on Agri-residues

Rapporteur: Mr Rainer Janssen
Three questions...

1. Common challenges (EU-China)
2. How R&I can address them
3. Best way of jointly tacking 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, workshops)
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！