

2w2: How to transition towards circular animal feed

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An important principle in the transition towards a circular bi-economy is the animal production system as mediator to return biomass into the human food system. Envisioning the 2050 horizon, all current waste flows from the food system are either prevented or upcycled into the human food system via animal feed.

This will require a transition, overcoming many barriers from a legal, technical, safety, business model and sustainability point of view. Also, there growing demands from the biobased economy and the replacement of fossil-based resources for materials and energy will continue to put pressure on the use of side streams for human food production.

A substantial portion of current side-flows from food production and processing are already being directed to animal feed. However, earlier research (e.g. REFRESH 2019) shows that approx. 7 Million tons of suitable biomass side flows from the European food system is considered off limits due to food safety considerations. This amounts to almost 10% from all food loss and waste across the EU that could find its way back into the food system if the context allowed.

The speed of transition in solving these barriers varies and leads to the identification of transition paths towards the 2050 horizon. Insects and pet feed can serve as interesting mediators, in-between steps to contribute to the building of scientific evidence for the safe, acceptable and attractive application of side-streams for animal feed.

Spanning over these barriers and transition pathways, four Public Private Partnership (PPP) projects from Wageningen Research and the Foundation Food Waste Free United aim to build both the scientific evidence as well as experience in practice to support the societal and policy case for safe and sustainable use of side streams for animal proteins.

During this workshop, several transition pathway will be illustrated by original case-work from the projects and considerations will be discussed following several angled questions:

- Is it legally allowed?
- Is it technologically possible (process technology & nutritional value as feed)

- Is it safe (food & feed perspective)
- Is it attractive for business (positive business model)
- Is it acceptable by consumers?
- Is it more sustainable than the current system?

The interactive discussion will seek to outline prerequisites for implementation, possible scenarios and conditions for chain and consumer acceptance. It will zoom in on the role of science, and how stakeholders such as industry, politics and the civil society can jointly move towards 2050.