

Animal welfare in a circular food system

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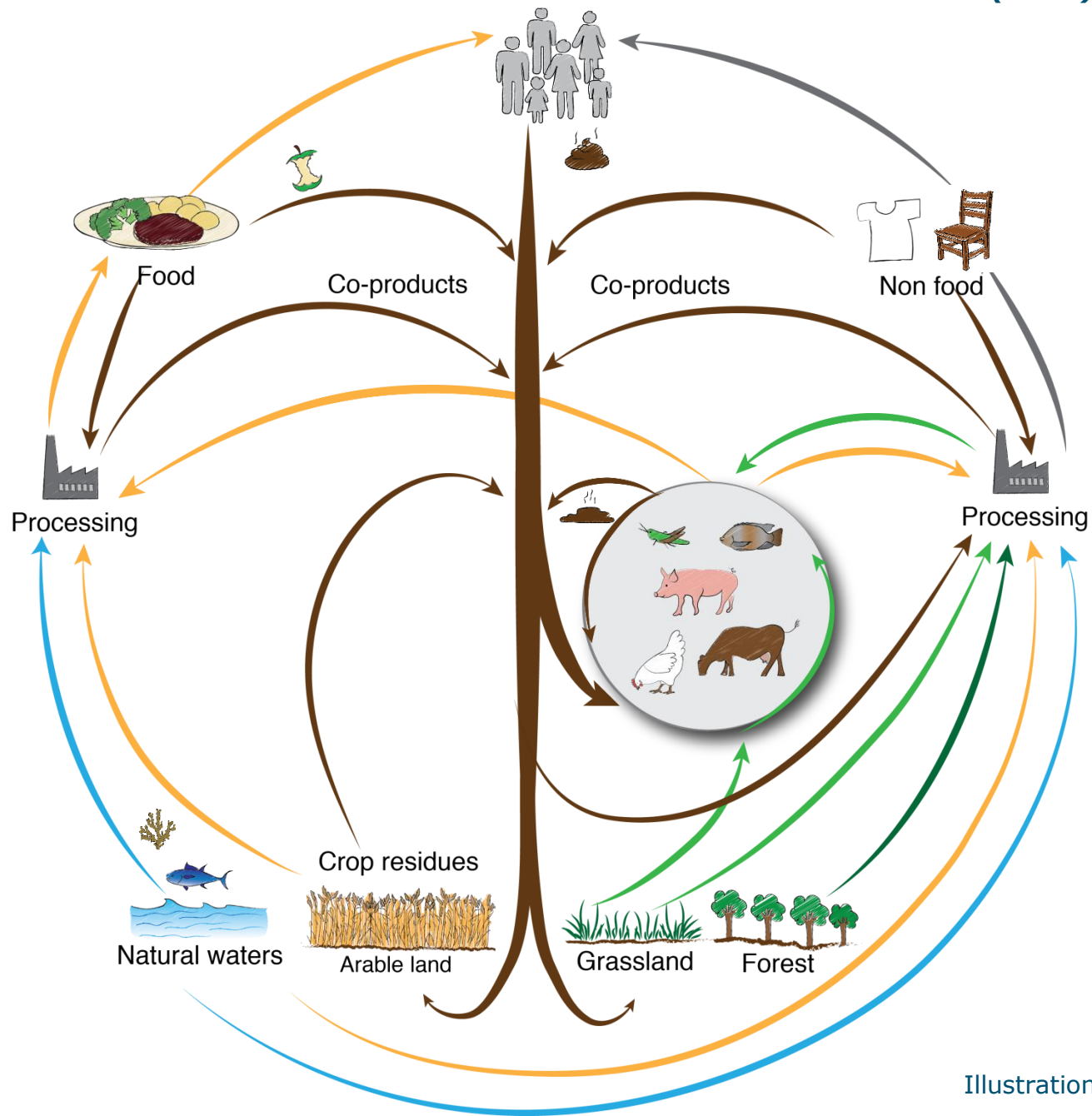


Introduction

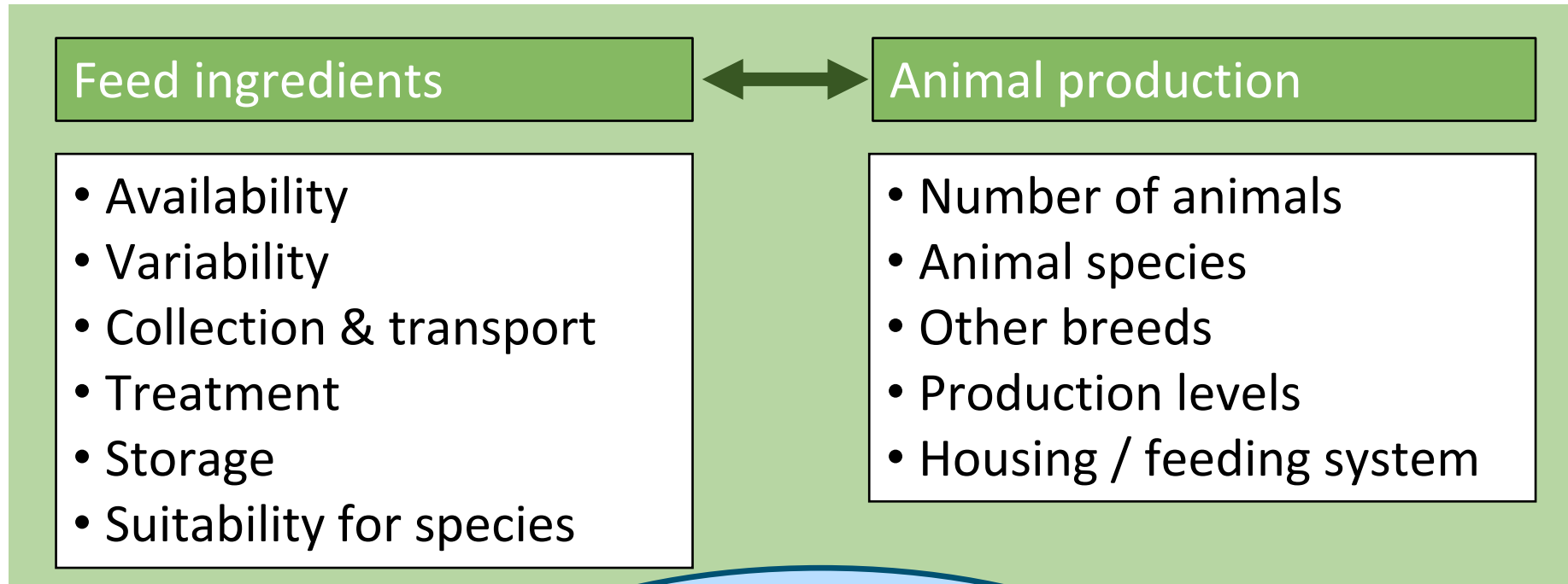
- 1/3 of global agricultural produce is lost or wasted.
- 40% of arable land is used to produce high quality feed for livestock of which half is used for monogastric animals
- Intensive livestock farming
 - High dependency on external inputs
 - High environmental impact
 - Impaired animal welfare.
- Circular food system: alternative for the future.

Principles circular food system (CFS)

- Land is primarily used to produce plant biomass for human consumption
- Waste and losses from food production, processing and consumption must be prevented, but if unavoidable, be recycled back into the food system
- Farm animals should mainly convert food waste and by-products not suitable for human consumption and biomass from grassland (De Boer and Van Ittersum 2018; Muscat et al. 2020)

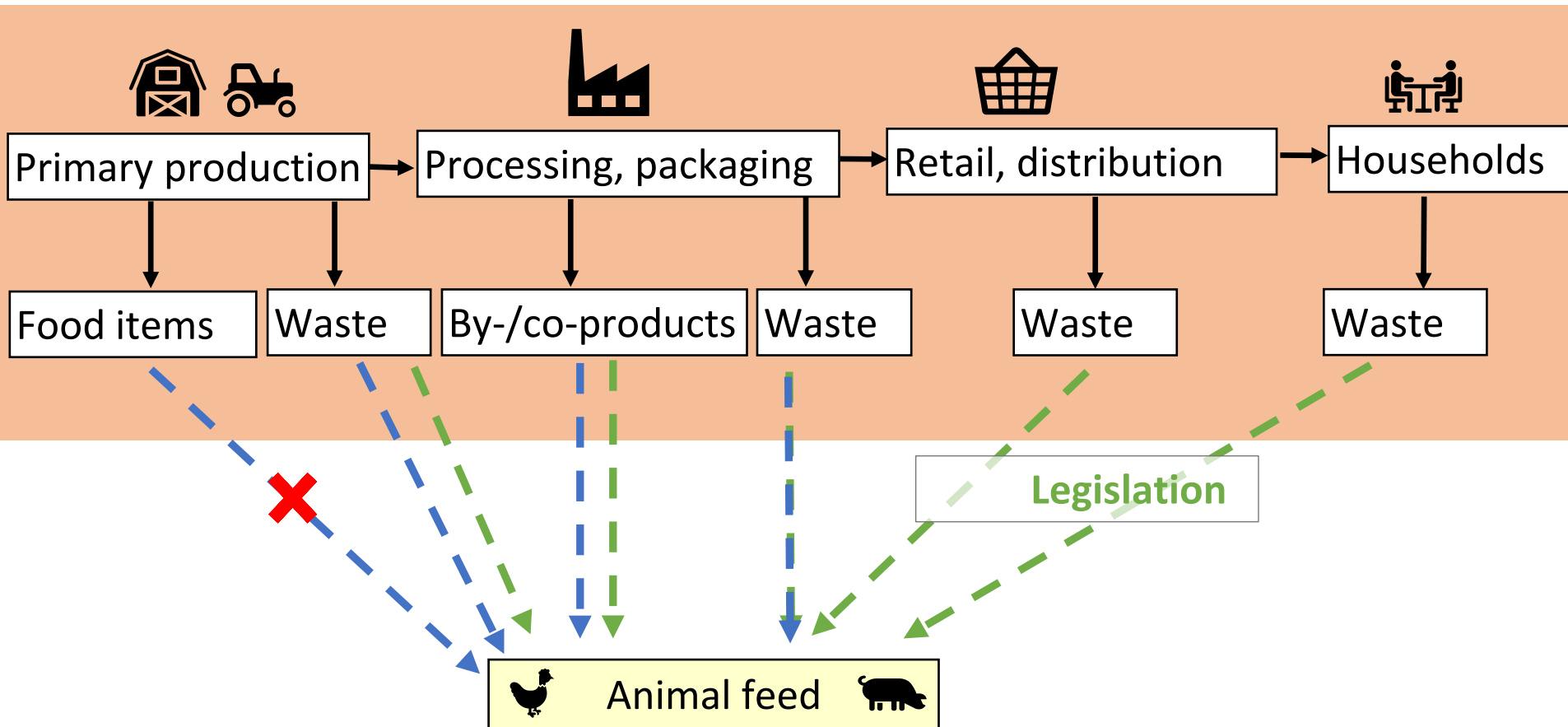


Potential changes due to CFS

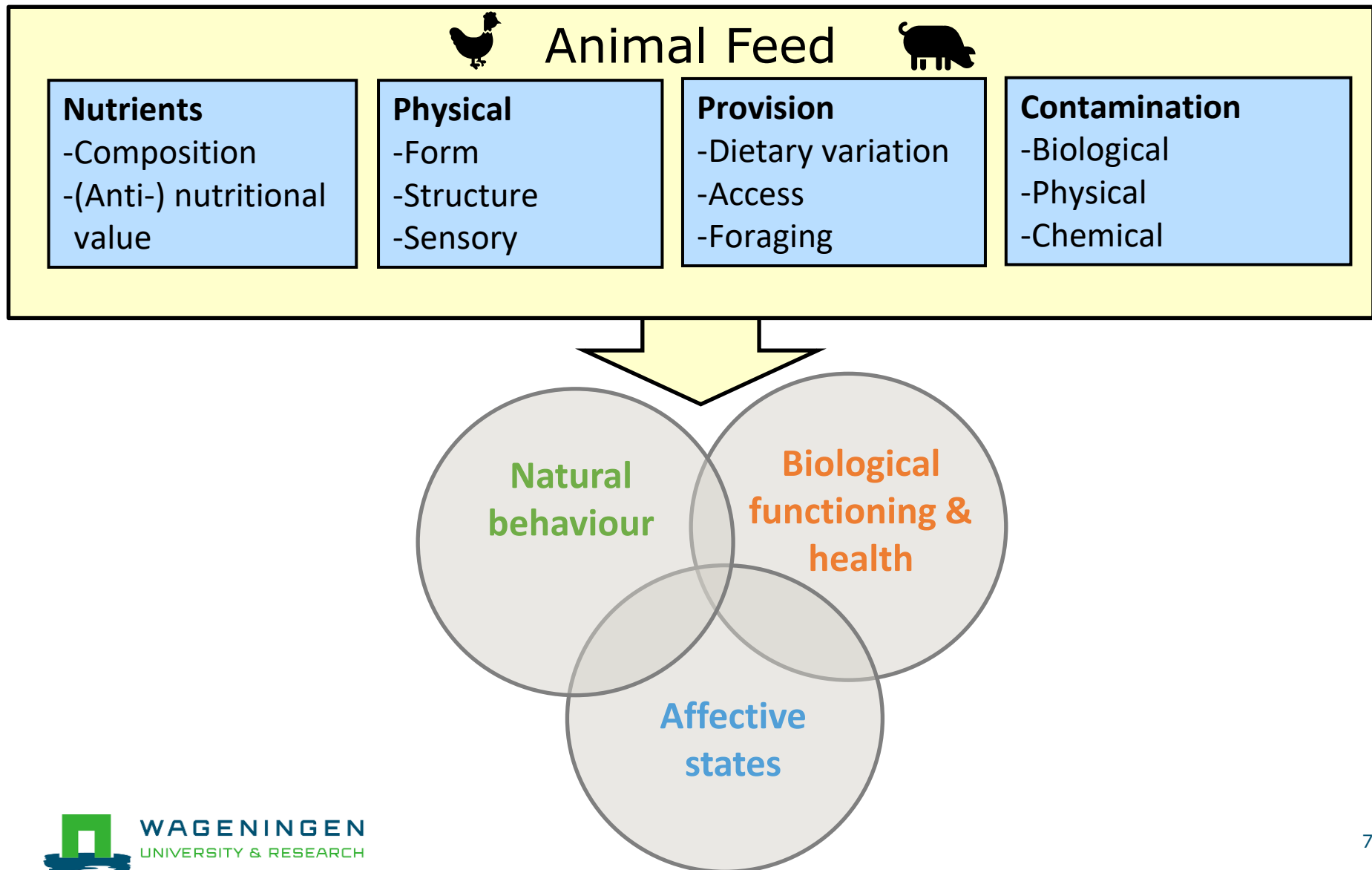


Animal welfare?!

Food and feed production chain



Feed aspects related to animal welfare



Inclusion of waste streams



- Reduce feed-food competition, environmental impact
- Legal and economic aspects
- Scale and location
- Different feed aspects can positively or negatively influence animal welfare
- Welfare consequences seem largely similar to current practices
- However, animals not only need good feed for a good welfare
- The envisaged transition to a CFS is the opportunity to simultaneously improve welfare by increasing e.g., dietary variation and stimulate species specific behaviour

Kipster: aiming for circular & animal friendly production



ZonVarken: aiming for environment and animal friendly production



Thanks to my co-authors
Marc Bracke, Iris Boumans
and You for your attention

