Renewable Plastics programme

CBP conference June 22nd 2023, Wageningen

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Renewable Plastics

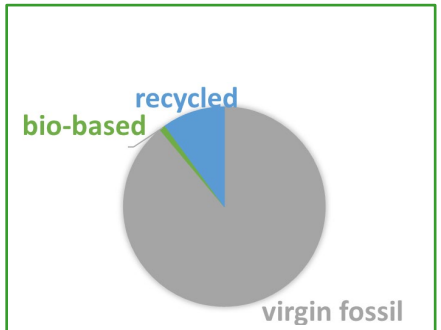
Plastics are indispensable our current society in applications like packaging, textiles, agriculture, building and automotive.

Current fossil-based plastics have two major sustainability issues:

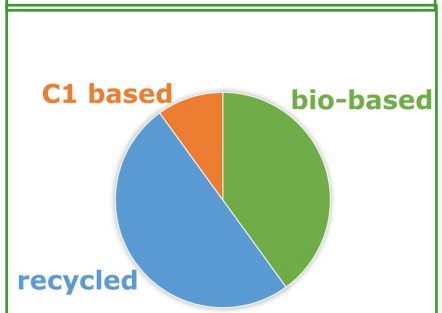
- The use of fossil feedstock contributes to climate change
- (Micro) plastics accumulate in the natural environment.

We develop plastics from renewable raw materials that are easy to recycle, do not accumulate in nature and thus contribute to a new circular plastics economy.

We use an integral approach feedstock use, to end-of-life



Plastic use 2023



Plastic use 2050

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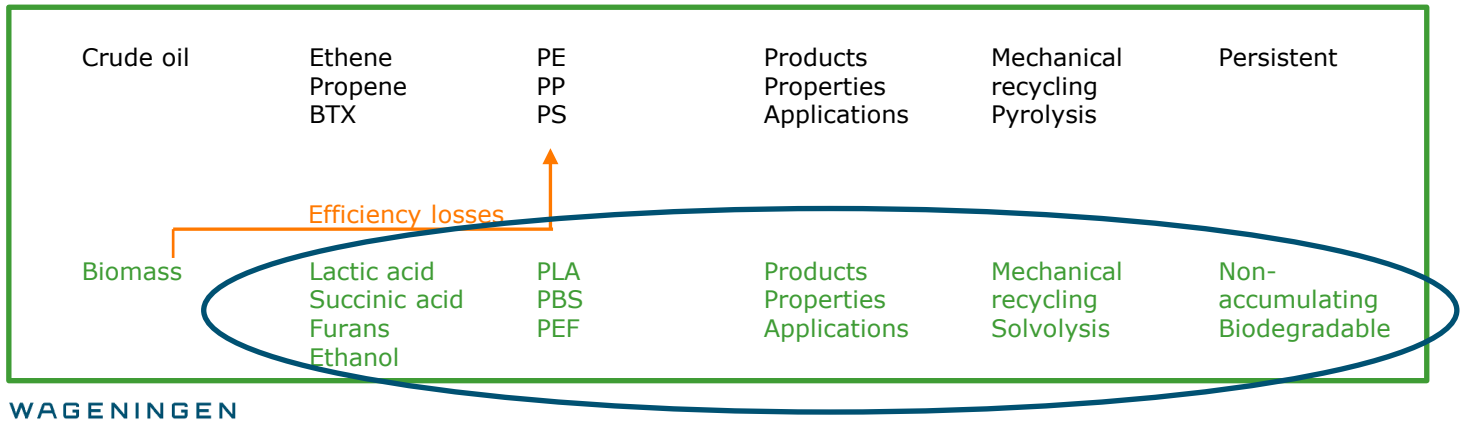
Renewable plastics

- It all starts at the end……
- Two main issues of plastics need to be addressed:
  - Contribution to greenhouse gas emissions
  - Pollution of water and soils by (micro)plastics

- Or…..
- At the beginning
  - Depletion of fossil feedstock
  - Use of persistent plastics

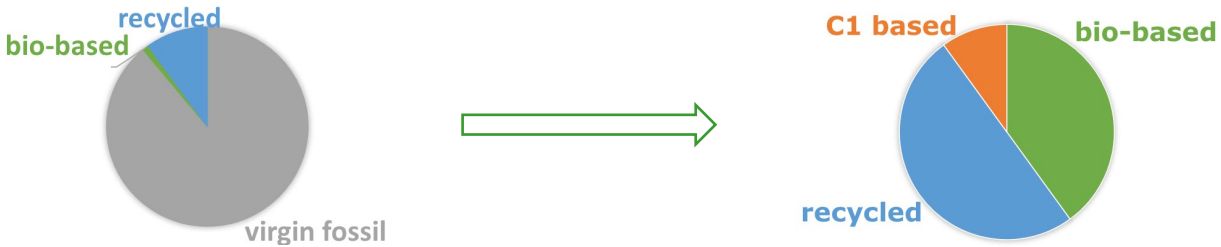


R&D needs

Renewable Plastics propositions

Strategies and policy development for renewable plastics.

Towards the circular plastics economy



Renewable feedstock

Monomers & polymers

Plastic processing

Applications

End of life

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Renewable Plastics propositions

New polymers for renewable thermoplastics

Developing functional circular plastics

Renewable feedstock

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Renewable Plastics propositions

Non-accumulating renewable plastics

Environmentally safe plastic products

Renewable feedstock

Monomers & polymers

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Renewable Plastics propositions

Renewable plastics processing & testing

Industrial implementation of biobased plastics

Renewable feedstock

Monomers & polymers

Plastic processing

Applications

End of life

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Presentations in this session

Designing the bio-polyesters of tomorrow through ring-opening polymerization -
Patrick Farquet (Sulzer Chemtech Ltd.)

Efficient production routes towards the plastics of the future

Latest developments on starch-based plastics
Fresia Alvarado Chacon (WUR)

Versatility of starch as a feedstock for new plastic products