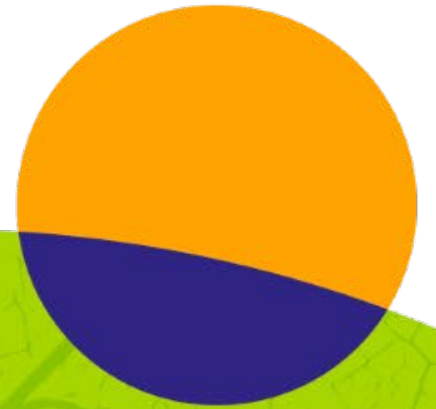




Processing beetroot leaves into high-value functional proteins and other food ingredients

Webinar 3 December 2020

Paulus Kusters





Horizon 2020
European Union Funding
for Research & Innovation



Bio-based Industries
Consortium



***Revalorisation of vegetable processing industry
remnants into high-value functional proteins and other
food ingredients***

GA-720728

Update 2019



- **BBI GreenProtein project Sept 2016 – May 2021** www.greenproteinproject.eu
- **June 2019, presentation at symposium in Arhus**
https://conferences.au.dk/fileadmin/conferences/2019/bioeconomy/Talks_June_27/Paulus_Kosters_Foulum_27062019.pdf
- **10 October “Grand opening” of the DEMO plant**
- **Sept till Dec 2019 first DEMO level campaign with beet leaves at 1500 kg input/h**
 - Harvest system developed of leaves and beets in one field operation
 - Good yield (20 – 25 ton/ha) and quality
 - Main challenges solved
 - Stable first process step (yield – sand)
 - Understanding significant difference in process settings between varieties
 - Yield losses in process steps and uptime of (membrane) systems

Update 2020



- Validation in many food products of unique gelling and binding properties of Rubisco
- Sept till Dec 2020 second DEMO level campaign with beet leaves
- Dedicated beet leaf harvester developed <https://youtu.be/jwAlrFbneEY>

Update 2020

- **Sept till Dec 2020 second DEMO level campaign with beet leaves**
 - Dedicated beet leaf harvester developed <https://youtu.be/jwAlrFbneEY>
 - Stable process with good yield and integrated spraydryer
 - Early leaf deterioration (Cercospora) had negative effect on yield and protein quality
 - Control of Microbiology at final process steps before spraydrying
 - First evaluation of other raw materials at demo level started
- **EFSA novel food application for Rubisco from Sugar Beet Leaves started**
- **In 2021 spring – summer campaign with other feed stocks**
- **Continuously validation of business case**

Questions?