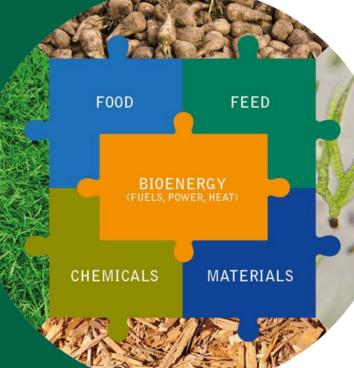
IEA Bioenergy

Round Table
The Netherlands (NL)





Bert Annevelink & René van Ree IEA Task42 meeting, Vienna, 24 October 2017



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Agro & Chemistry magazine

AGRO@CHEMISTRY #3 - 2017







 One of the recommended sources for information about Dutch situation



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Scaling up lignin crude



 The aim of the InSciTe project Lignin Riches is to transform lignin into an intermediary product crude lignin oil (CLO) via a thermo-catalytic process

- This CLO can be used as marine fuel
- Company Vertoro plans to scale up the process at the Brightlands Chemelot Campus in Geleen
- Pilot scale: a barrel (160 litres) of oil a day
- Patent applications are still pending



Reference: <u>www.agro-chemistry.com</u> and <u>http://www.chemelot-inscite.com/en/project/lignin-riches</u>





Bioasphalt made of lignine

- The first bioasphalt bicycle path based on lignine was opened in June on the Campus of Wageningen University & Research
- Research to replace the fossil adhesive bitumen in asphalt with lignine

The bioasphalt is produced according to a patented formulation

of 50% lignine and 50%





Reference: http://www.wur.nl/en/article/Bioasphalt.htm





Some EU biorefinery projects with Dutch input

 Macrocascade (2016-2020) - viability, and bioeconomic impact of processing cultivated seaweed to create a diverse range of high-value products - BBI JU www.macrocascade.eu



 Pulp2Value (2015-2019) - objective is to isolate more valuable products from sugar beet pulp – BBI JU -http://pulp2value.eu/



 Drive4EU (2014-2018) - dandelion rubber and inulin valorization and exploitation for Europe – EU-FP7 www.drive4eu.eu



URBIOFIN (2017-2021) - objective is to demonstrate techno-economic and environmental viability of an integrated and innovative biorefinery for the transformation of the organic fraction of municipal solid waste (MSW) into new marketable bioproducts, chemical building blocks, biopolymers and additives. - BBI JU - www.urbiofin.eu



Reference: https://bbi-europe.eu/projects







Thank you





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www.iea-bioenergy.task42-biorefineries.com