



General information	
PPP number	AF-15233
Title	PEFPACK - Duurzame verpakkingsmaterialen gebaseerd op agrozijstroom (Sustainable packaging materials based on agricultural side streams)
Roadmap/Umbrella	Biobased Economy TKI AF BBE
Executive knowledge institution(s)	Wageningen Food & Biobased Research
Research project leader (name + e-mail address)	Maarten van der Zee (maarten.vanderzee@wur.nl)
Coordinator (on behalf of private parties)	Andrea Arias (andrea.arias@corbion.com) Stephan Roest (stephan.roest@corbion.com)
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Start date	01-04-2016
End date	30-05-2019
Short content description	In the PEFPACK project, Corbion, Refresco and WFBR work together in the development of new 'PEF' packaging materials (such as packaging film and beverage bottles) based on furan dicarboxylic acid (FDCA).

Highlights
<p>In the first half year of the project, the following results have been achieved:</p> <ul style="list-style-type: none"> • Corbion was able to produce approx. 50 kg of purified, polymer grade FDCA through microbial oxidation of HMF. • Part of this FDCA was used to produce various R&D-, reactor-, and SSPC-grades of PEF which were subsequently characterized by WFBR with regard to molar mass, intrinsic viscosity, DEG contents, thermal properties, rheological properties, crystallisation behaviour, etc. • Two sheet-extrusion trials with SSPC grade PEF have been performed resulting in several samples of PEF film, suitable for 2D biaxial stretching trials to modify the mechanical and barrier properties of the material. • WFBR has performed several PEF polymerization trials introducing small amounts of comonomers with the aim of altering/improving the material properties. Several materials have been synthesized and characterized with regard to incorporation ratio, molar mass, DEG content and thermal properties.

Number of delivered products in 2016			
Academic articles	Reports	Articles in journals	Introductions/workshops
-	-	-	-

Link naar Kennisonline/TKI AF:

<http://www.tki-agrifood.nl/projecten/projecten-bbe/15233>

<http://www.wur.nl/nl/project/Duurzame-verpakkingsmaterialen.htm>