



Bringing added value to agriculture and forest sectors by closing the research and innovation divide

Cooperation through a H2020 Consortium

BioEast Conference, OMEK, Budapest
20th Sept 2017

IT Tralee | James Gaffey | James.Gaffey@staff.ittralee.ie | +353 (0)66 714 4253



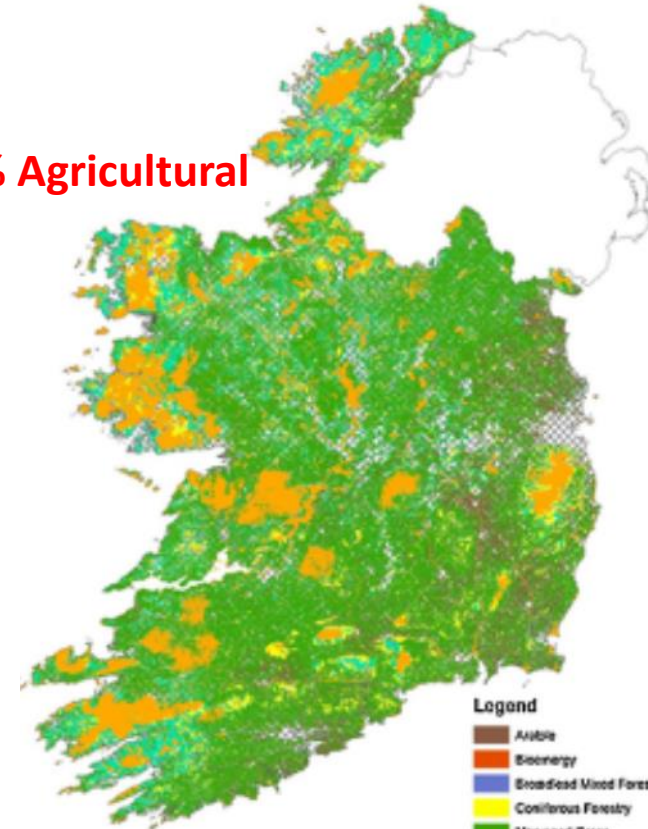
This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 696394

Irish Hub Region and Network

- 2016 – Model Demonstrator Region
 - National Bioeconomy Campus
- 2016 - Irish Bioeconomy Foundation
- 2017 - **National Bioeconomy Consultation**

- Innovative research community and strong agri-food and pharma sectors
- **2nd highest percentage of land devoted to agriculture**
- Growing Forestry Sector

60% Agricultural



10.5% Forestry



Irish Industry - Opportunity Landscape



- Where scale exists
 - Existing Scale - Dairy, food, brewing sectors ✓
 - Secure Supply of biomass ✓
 - R&D Capacity ✓ e.g. BBI
- Opportunities
 - Process Development
 - Industrial Symbiosis
 - Joint Ventures e.g. Reverdia



Challenge: Bringing biobased economy to rural regions

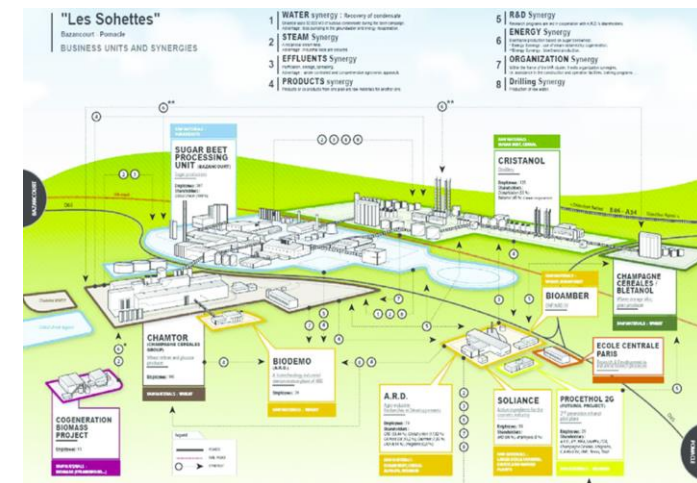




1. As a biomass supply chain
e.g. Novamont, Matrica



2. As a Biorefinery
Cooperative e.g.
Pomacle Bazancourt,
France. “Industrial
Symbiosis”





3. "Farmers as bioprocessors"
e.g. Courage & Grassa, NL



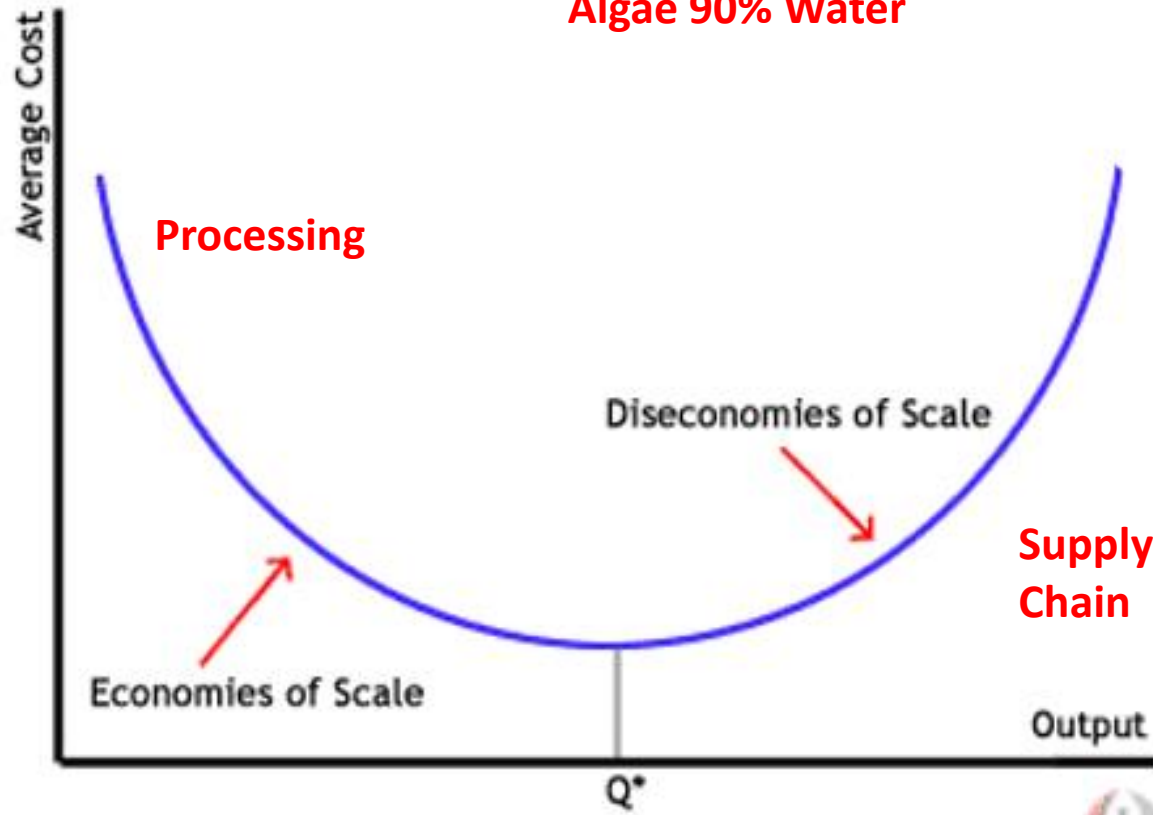
Deze GRASSA Raffinage Demonstratie is mede mogelijk gemaakt door:
Waterkwaliteit en STOWA Natuurlijk Groen als Grondstof
interreg Vlaanderen-Nederland
stowa

Small Scale Biorefinery Models

Diseconomies of Scale – A new opportunity?



Grass 90% Water
 Beet 80% Water
 Algae 90% Water



Perspective



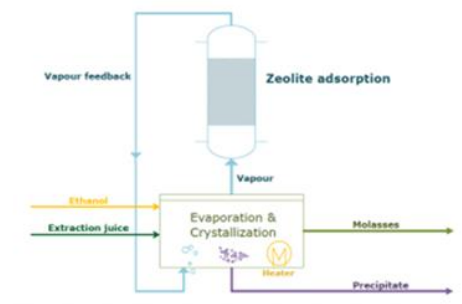
Opportunities for small-scale biorefinery for production of sugar and ethanol in the Netherlands

Ruben C. Kofschoten, Marieke E. Bruins and Johan P.M. Sanders, Agrotechnology and Food Sciences, Wageningen UR, the Netherlands

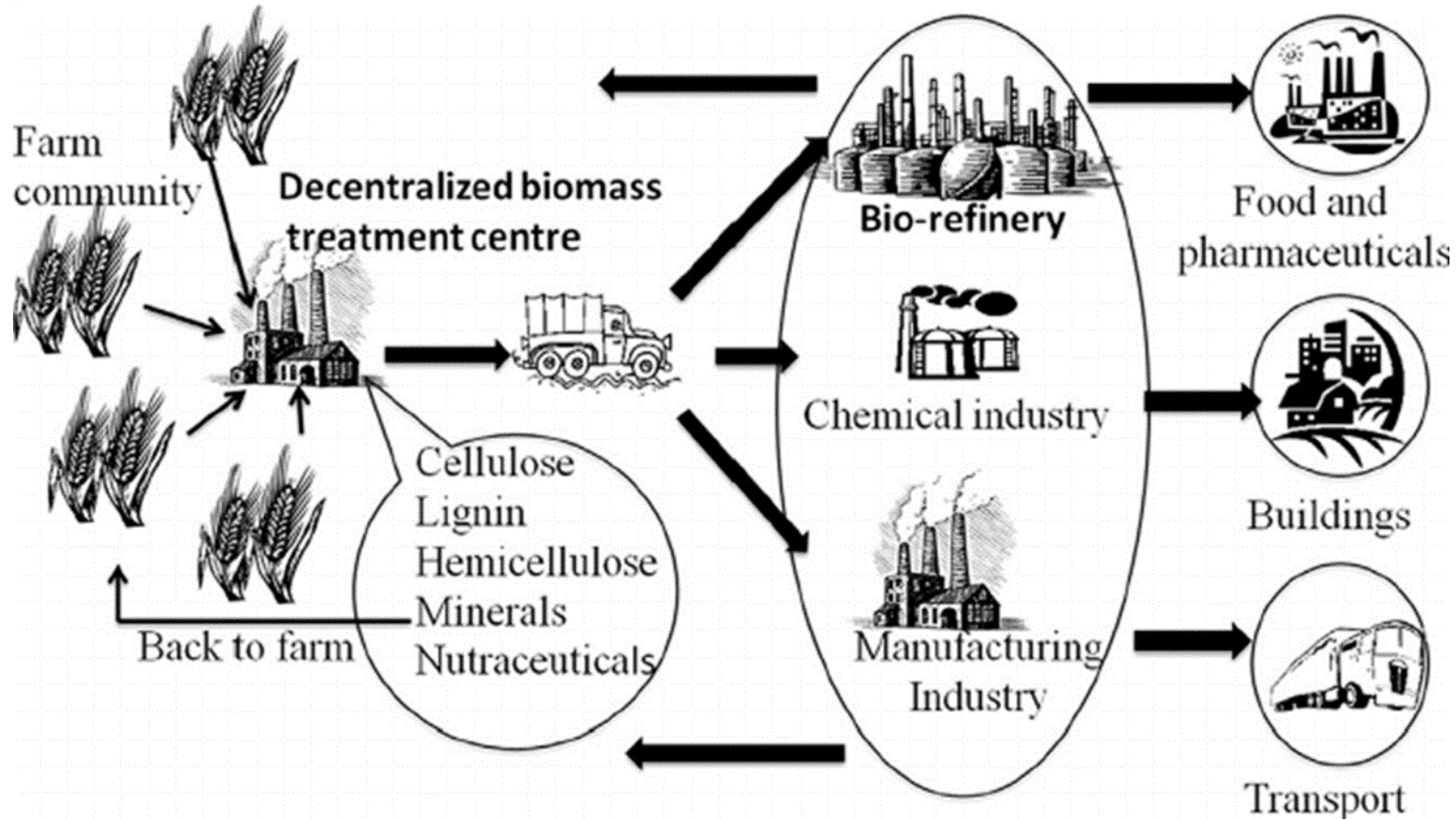
Received September 30, 2013; revised March 3, 2014, and accepted March 4, 2014
 View online at Wiley Online Library (wileyonlinelibrary.com); DOI: 10.1002/bbb.1487;
 Biofuels, Bioprod. Bioref. (2014)

Abstract: Developments such as the Common Agricultural Policy reform, growth of the bio-based economy, increasing energy prices, increasing sustainability demands, and expected growth of global sugar demand change the environment in which the sugar producing industry operates. In order to remain competitive and profit from this, the traditional large-scale sugar producing industry can adapt. The aim of this study was to address sustainability and energy issues of the traditional sugar production process and to provide opportunities for improving the process and value

Process flow Anti-Solvent Crystallization



Decentralized/Small-Scale Biorefineries



“Reducing CAPEX and transport costs”

“Keep nutrients on the land”

“Rural Innovation and Regeneration”

“Upskilling and creating new jobs”

Irish Inter-hub Biobased Mission – Feb 2018



Location: WUR Biobased
Innovation Centre,
Wageningen, Netherlands

Date: 14th-15th Feb 2018



Thank you!

Email : james.gaffey@staff.ittralee.ie
Phone: +353 (0)66 714 4253
Mobile: +353 (0)86 154 4407
Website: www.agriforvalor.eu
Facebook: <https://www.facebook.com/agriforvalor>
Twitter: @AgriForValor

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