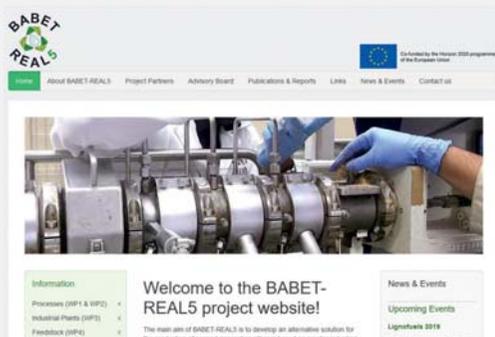




BABET-REAL5 project partners presenting the project at different conferences

BABET-REAL5 Website

Visit the project website www.babet-real5.eu to find out more about the upcoming workshops and the latest research results from the project partners and the project itself.



The BABET-REAL5 project partners have already participated at many international conferences (see more at: www.babet-real5.eu in the **News Section**) where the research results were presented and discussed with other experts from industry and the scientific society. The project partners will continue to present their results at conferences and symposia in the future.

www.babet-real5.eu



The BABET-REAL5 Consortium in Montevideo

BABET-REAL5 Partners

The BABET-REAL5 consortium includes 16 research partners from Latin America and Europe.

- Argentina: INTA
- Denmark: AAU
- France: INPT [Coordinator], APYGEC, ARTERRIS, INSAT, MAGUIN, OVALIE, SOLAGRO, URCA
- Germany: WIP
- Mexico: CMM, UNAM
- Portugal: LNEG
- Spain: CIEMAT
- Uruguay: INIA

Contact us for more information

BABET-REAL5 Coordination:

Gérard Vilarem
gerard.vilarem@ensiacet.fr

Stakeholder Involvement:

Rainer Janssen
rainer.janssen@wip-munich.de
 Ingo Ball
ingo.ball@wip-munich.de



AN INTERCONTINENTAL PROJECT

**New Technology and Strategy
 for a Large and Sustainable
 Deployment of Second
 Generation Biofuel
 in Rural Areas**



www.babet-real5.eu

The sole responsibility for the content of this leaflet lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the INEA nor the European Commission are responsible for any use that may be made of the information contained therein.

Photo Credits: D. Rutz, INPT, CIEMAT, F. Girio, I. Ball



BABET-REAL5 is co-funded by the European Commission in the Horizon 2020 Programme (Project No. 654365).

The BABET-REAL5 Project

The main aim of BABET-REAL5 is to develop an alternative solution for the production of second generation ethanol based on smaller industrial scale than the already realised plants of first generation ethanol. Such plants of small industrial scale shall be applicable to a large number of countries, rural areas and feedstock.

The target is to reach technical, environmental and economical viabilities in production units processing at least 30,000 tons equivalent dry biomass (t_{dm}) per year. This approach will definitely enlarge the scope of biomass feedstock exploitable for the production of biofuel and create better conditions for the deployment of production sites, to the benefit of rural areas in Europe and worldwide.

Events

BABET-REAL5 workshops



Several workshops will be held from March 2019 on

To disseminate the results of the BABET-REAL5 project and to find out about the realisation chances for the concept, in the next year several workshops will be held. The first workshop will take place in Straubing, Germany on 21 March 2019. Another workshop will be organized in the second half of 2019 in Argentina. In the beginning of 2020, in Tarbes, France a final workshop will be held onsite of the pilot plant in which the BABET-REAL5 concept will be technically investigated.

Results already achieved

Lignocellulosic biomass feedstock investigation

After developing a methodology for the investigation of sustainable lignocellulosic biomass feedstock, four regions were studied to find out areas with minimum 30,000 t_{dm} biomass production per year in a 50-km radius.

Best results:

- France: in South-West, 207,000 t_{dm} of corn cobs and tips
- Germany: in Lower Bavaria, 120,000 t_{dm} of wheat straw
- Argentina: in the Tucuman region, 127,000 t_{dm} of sugarcane crop residues
- Uruguay: in the Rivera region, 50,000 t_{dm} of eucalyptus grandis forest residues

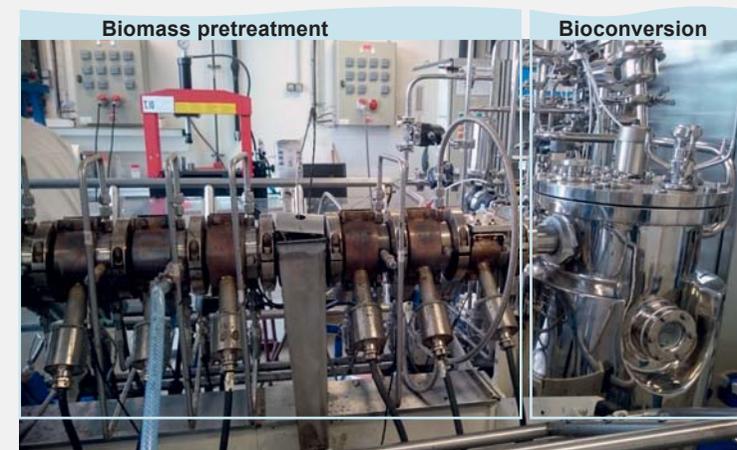
All the mentioned amounts considered the risks associated to the removal and competitive uses of the biomasses and the climate change impacts on their sustainable production.

Biomass pretreatment and bioconversion processes

The biomass pretreatment process has been optimised at laboratory scale for different biomasses in terms of technological and environmental efficiency.

The bioconversion processes for the transformation of cellulose and hemicelluloses in ethanol have been studied and optimised on the basis of Simultaneous Saccharification and Cofermentation of C5 and C6 sugars (SSCF) with and without a short prehydrolysis step.

Both processes (biomass pretreatment and SSCF) have been run continuously from two interconnected laboratory reactors. Next step will be pilot scale.



Technical concept: extrusion and fermentation in a one-stage reactor

Outlook

Business cases

Four business cases for the implementation of industrial scale 2G ethanol plants are under investigation in four regions where sustainable productions of lignocellulosic biomasses have been identified. The business cases take into account the national and regional conditions including the legal frames for the exportations of the products (biofuels and other by-products) and the importation of commodities and raw materials to the plant (opportunities, prices, distances, etc.). These data are required not only to evaluate the economic viability of the business case but also of the environmental impact (i.e. Life Cycle Assessment from cradle to grave). First results indicated that there are differences between countries, notably between Europe and the American continent, and more favourable conditions in certain cases.

www.babet-real5.eu