Introduction to FACCE SURPLUS

Kick-off Meeting

Aarhus University
Foulum, Denmark

N. Tinois, JÜLICH

FACCE SURPLUS
SUSTAINABLE AND RESILIENT AGRICULTURE FOR FOOD AND NON-FOOD SYSTEMS

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Agenda

Welcome session

13:00	Welcome by Aarhus University *Niels Chr. Nielsen, Dean of Science and Technology, Aarhus University, Denmark*
13:10	Presentation of agenda Structure, timeline of FACCE SURPLUS *Nicolas Tinois, Research Centre Jülich, Germany*
13:35	Unfolding the potential of the Bioeconomy – the role of biorefineries *Johannes Van Esch, Ministry of Economic Affairs, the Netherlands*
14:00	Scope of FACCE SURPLUS first call *Paul Colonna, Institut National de la Recherche Agronomique, France*

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14:15	Intriduction to Hoejlunds Assembly *Knud Tybirk, Samso Municipality*
14:20	Break and poster session

FACCE SURPLUS presentations

14:45	Project presentations and interaction with stakeholders: Hoejlunds Assembly *Knud Tybirk, Samso Municipality*
16:20	Summary *Niels Halberg, Director at Danish Centre for Food and Agriculture, Aarhus University*
16:30	Guided tour at AU Foulum – Danish Technology Platform for Biorefining
19:30	Dinner at Restaurant Golf Salonen

Tomorrow **Biorefining Seminar & Partnering Workshop**

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Purpose of this event

- present objectives, actions and expected results of the participating research projects (among themselves and to stakeholders)
- introduce the project members in order to clarify expectations of all parties involved, including outlining the project goals as well as the individual responsibilities, and to create a commitment to FACCE SURPLUS
- promote the work in progress within the frame of FACCE SURPLUS and address potential expectations of stakeholders and to foster collaboration across Europe
- creating project groups/consortia for project applications in 2017 and forward under FACCE SURPLUS, Horizon 2020 or the Bio-Based Industries Joint Undertaking

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FACCE SURPLUS

FACCE SURPLUS is…

- An ERA-NET Cofund (H2020) i.e. activities (in part. Research projects) co-funded by the EU (max. 33% of costs)
- Running under the umbrella of FACCE-JPI (Joint Programming Initiative on Agriculture, Food Security and Climate Change)
- Dedicated to improve collaboration across the ERA in the range of diverse, but integrated food and non-food biomass production and transformation system, including biorefining
- Between the EC and 15 countries/regions: Belgium (2 regions), Cyprus, Denmark, Estonia, Finland, France, Germany, Italy, the Netherlands, Norway, Poland, Romania, Spain, UK (New Zealand „associated“)
- Duration of the ERA-NET: 01.03.2015 – 28.02.2020; total EU funding = 5 mio.€

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First call

- The FACCE SURPLUS first call is the „Co-funded call“ (with EU contribution) -> EU rules e.g. on evaluation, eligibility and selection!
- Launched on 07.01.2015 with approx. Budget of 15 mio.€
- 67 pre-proposals received by submission deadline (March), checked for eligibility (almost all) and peer-reviewed -> ranking list
- 27 full proposals submitted (Sept.) peer-reviewed (at least 3 independant experts / proposal) -> ranking list
- Selection strictly according to the ranking list -> 14 best proposals selected for funding in Nov./Dec. 2015 (21%) for approx. 14,5 mio.€
- Preparation of grants (bilateral contracts between research partner and related funding agency)

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Søg

Research projects

In november 2015, 14 projects were selected to receive funding in the frame of the FACCE SURPLUS ERA-NET.

On these pages, you will find more information on the projects.

Want to know more about the application process?

Find it here

AGRONICKEL

Developing Ni agromining on ultramafic land in Europe.

Serpentine (ultramafic) outcrops in Europe cover over 10,000 km2 of low fertility and low productivity, making them unattractive for traditional agriculture. AGRONICKEL aims to implement agroecosystems which can lead to better soil resource efficiency and to offer a fully integrated, new agromining agriculture.

Read more

BarPLUS

Modifying canopy architecture and photosynthesis to maximize barley biomass and yield for different end-uses.

BarPLUS will identify genes, alleles and lines needed to increase barley plant biomass, without penalty on grain yield, in the agro-climatic and management scenarios predicted for 2030 in Southern and Central Europe.

Read more

BioC4

New integrative sustainable system from C4 photosyntetic miscanthus to biological synthesis of valuable C4 compounds.

BioC4 will focus on developing technologies around'bio-isobutanol', a powerful compound platform from which multiple products with high market potential can be launched. The aim is to develop an industrial isobutanol production process.

Read more

INTENSE

Intensify production, transform biomass to energy and novel goods and protect soils in Europe.

INTENSE will contribute to reconverting poor, abandoned and polluted sites into sustainable agricultural production across Europe. Innovative systems-based tools for the development and implementation of integrated food and non-food production serving for intensified land management of these land areas will be constructed.

Read more

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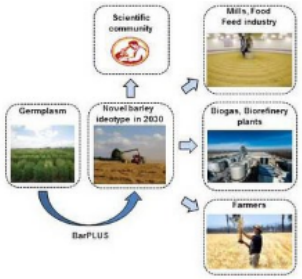
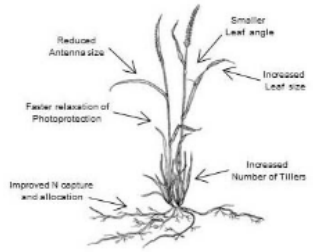
BarPLUS

Modifying canopy architecture and photosynthesis to maximize barley biomass and yield for different end-uses (BarPLUS)



Project summary:

Barley is a major crop worldwide, with Europe producing the greatest share (~60 MT/yr). Beside grains barley plants produce an almost equivalent amount of straw that in the past was considered as a secondary product of minimal value. Indeed most of the genetic progress to increase yield was obtained through a change in biomass partitioning from straw to grains and the current plant architecture has been mainly driven by the necessity of increasing the harvest index. Nevertheless, the increasing demand for renewable materials makes straw, and especially barley straw characterised by the largest content of carbohydrates among cereals, a valuable product for its potential conversion into biofuels and other products. Indeed, barley crop residues are desirable feedstocks because of their low cost, immediate availability, no competition with food, and relatively concentrated location in the major grain growing regions. Given this perspective, this consortium believes that the current barley plant architecture, together with photosynthesis performance and Nitrogen use efficiency, should be revised to maximise the farmer income (grain value plus straw value).
To this aim, BarPLUS will identify genes, alleles and lines needed to increase barley plant biomass, without penalty on grain yield, in the agro-climatic and management scenarios predicted for 2030 in Southern (Spain and Italy) and Central (Germany and Poland) Europe.
This goal will be achieved through: i) modifications in plant architecture optimising tillering, leaf size and angle, ii) either an intrinsically improved efficiency of the photosynthetic process or indirectly through an improved capture/allocation of nitrogen maximising radiation use efficiency, iii) field trial evaluation, and iv) eco-physiological process-based models, integrating available knowledge on crop response to genetic, environmental and management factors. We will deploy mutagenized lines and diverse accessions carrying natural allelic variants in candidate genes (CGs) for tillering, leaf size and inclination angle, nitrogen capture and allocation and in components of the light absorption and photo-protection mechanisms of the photosynthetic apparatus to evaluate their usefulness to increase barley biomass production.
Taking advantage of the unique resources of mutants and exome-resequencing data available for barley, BarPLUS will deliver knowledge and tools to develop a new barley ideotype that, based on modelling evaluation aimed at identifying the most promising combinations of morpho-physiological traits over long term period, and under contrasting agro-climatic conditions, will provide farmers with 5-to-10 % more biomass per hectare without compromising grain yield. Furthermore, the environmental analysis, carried out using an LCA approach, will quantify the environmental benefits arising from the development of a barley crop characterised by a higher aboveground biomass production.



Coordinator:
Prof. Paolo Pesaresi
Università degli Studi di Milano, Italy
Email: paolo.pesaresi@unimi.it

Project partners:
Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CRA), Italy

University of Lleida, Spain

University of Potsdam, Germany

University of Silesia, Poland

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Potential additional activities (outcome scoping WS)

FACCE-JPI IP 2016-2018 -> 1 priority “Explore and exploit refinery concepts for the multiple use of biomass under climate change, taking economic and environmental implications into account”

FACCE SURPLUS organised scoping workshop in Ghent (BE) in May 2016 on that issue; 4 activities were identified, which should be taken forward:

- 1. Launching a transnational call for research projects on “small-scale biorefineries”, in the broader sense. This includes considerations on multi-purpose/multi-products biorefineries , multi-input biorefineries, and sustainable inputs for biorefinery in the context of climate change as well as the consideration of the biorefinery’s potential to revitalise e.g. abandoned land, thus becoming valuable sources for biomass. Regional characteristics should be taken into account;
- 2. Conducting a broad-based (desk) study on economics and social aspects of biorefineries but not limited to FACCE SURPLUS aims (therefore this activity should be organized at FACCE-JPI level);
- 4. Organizing one or more workshops focused on running FACCE SURPLUS projects with the objective to identify their research gaps and potential for optimisation (providing potentially valuable input for activity 3).
- 3. By the end of the ERA-NET FACCE SURPLUS, creating a “Knowledge Hub-like” network for the FACCE SURPLUS-funded projects, in order to allow them to fill research gaps in their activities and take further the developed technologies to the next implementation steps.

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Potential additional activities (DoA)

- another scoping workshop on a topic to be defined
- a “summer school”, potentially in summer 2017
- in addition to the common kick-off meeting of FACCE SURPLUS research projects (Sept. 2016 in DK), **common mid-term (coordinators, in France, Fall 2017) and end-term meetings (coordinators and partners in Germany, probably Fall 2018)** will be organized (potentially in combination with other events)
- a stakeholder event on bioeconomy
- an international bioeconomy conference
- *Potentially in combination with other events*

- And further calls; plan is 1X per year so potentially 1 each in 2017, 2018 and 2019.
- “Ultimate” aim is to have a “joint programme” (similar calls repeated each year)

- Considering the duration of FACCE SURPLUS (5 years) plans may change and new ideas might emerge

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Thank you for your attention!

Nicolas Tinois
Project Management Jülich
Division Bioeconomy
Forschungszentrum Jülich GmbH
D-52425 Jülich
Tel.: +49 (0)2461 61-2422
n.tinois@fz-juelich.de