CropBooster-P

In perspective; where do we go to?

European Commission
Horizon 2020
European Union funding
for Research & Innovation

Wrapping-up CropBooster-P (1)

- CropBooster-P will end on April 30th, 2022
- Then, we will have till July 5th to write our Final Report and to complete some remaining Deliverables
- The Final Report also contains the Final Financial Report. This financial report is due May 30th, and you will get instructions regarding this from the WUR Financial Department.
- A small number of Deliverables still must be finalized:
  - D3.3: Recommendation dossier on mid-term outreach measures to increase public awareness and understanding of novel technologies.
  - D5.3: A report describing the management structure that can be used in a future Europe-wide program
  - D5.4: A report describing the framework for expressing the moral correctness of the program and its social necessity
  - D5.6: A research plan for a future European program
  - D5.7: A white paper describing the route to improved crop yields, nutritional quality and environmental protection in Europe, including the future consortium

Wrapping-up CropBooster-P (2)

- We also will need to include all publications in the report, pls send us all missing manuscripts either published or in preparation.
- Published:
  - Improving the Efficiency of Photosynthetic Carbon Reactions. Andreas Weber et al. , Plant Physiology
  - Biotechnology for Tomorrow's World: Scenarios to Guide Directions for Future Innovation. Marc Cornelissens et al., Trends in Biotechnology
  - MRP Transporters and Low Phytic Acid Mutants in Major Crops: Main Pleiotropic Effects and Future Perspectives. Frederico Colombo et al., Frontiers in Plant Science
  - Designing the Crops for the Future; The CropBooster Program. Jeremy Harbinson et al., Biology
  - Going virtual: adapting in-person interactive focus groups to the online environment. Jonathan Menary et al., Emerald Open Research
  - Approaches and determinants to sustainably improve crop production. Alain Gojon et al., Food & Energy Security
  - Prospects to improve the nutritional quality of crops. Last Scharff et al., Food & Energy Security
  - Plant growth: the What, the How, and the Why. Jonas Hilty et al., New Phytologists
  - Micronutrient homeostasis in plants for more sustainable agriculture and healthier human nutrition. Ana Assunção et al., Journal of Experimental Botany

Wrapping-up CropBooster-P (3)

- In preparation:
  - CropBooster-P: towards a roadmap for plant research to future-proof crops in Europe. Alexandra Baekelandt et al , FES (accepted)
  - Biological processes determining crop yield potential. Alexandra Burgess,Céline Masclaux-Daubresse, Alexandra Baekelandt et al, FES
  - Paving the way towards future proofing our crops. Alexandra Baekelandt et al., FES
  - "Modeling paper". Jeremy/Xinyou/Sam Taylor (1 or 2?)
  - "Citizen Jury paper". Abhishek/Arnout/Jess/ (+ 2 more from Abhishek et al ??)
  - Ralf, WP3 ??
  - Norbert, WP4 Focus Groups????
- In case you want to contribute still to the Special Issue in FES, please contact Alexandra Baekelandt
- On July 19th our project results will be reviewed in a session between the ExCom, our project officer and 2 external reviewers.

From CropBooster-P to the CropBooster Program(1)

- We have the ambition to set-up a large scale, pan-European research program to execute the CropBooster-P roadmap.
- This program has the (working) title "the CropBooster Program".
- The justification for this, and the goals and ambitions of the program have been published last year by the Excom (plus Karin & Francesco):
  - Designing the Crops for the Future; The CropBooster Program. Jeremy Harbinson et al., Biology
- This paper has gained a lot of attention, so we are convinced that there indeed is a need for this program.

Altmetric scores for Designing the Crops for the Future; The CropBooster Program

About this Attention Score

In the top 25% of all research outputs scored by Altmetric

Among the highest-scoring outputs from this source (#50 of 1,872)

High Attention Score compared to outputs of the same age (90th percentile)

High Attention Score compared to outputs of the same age and source (95th percentile)

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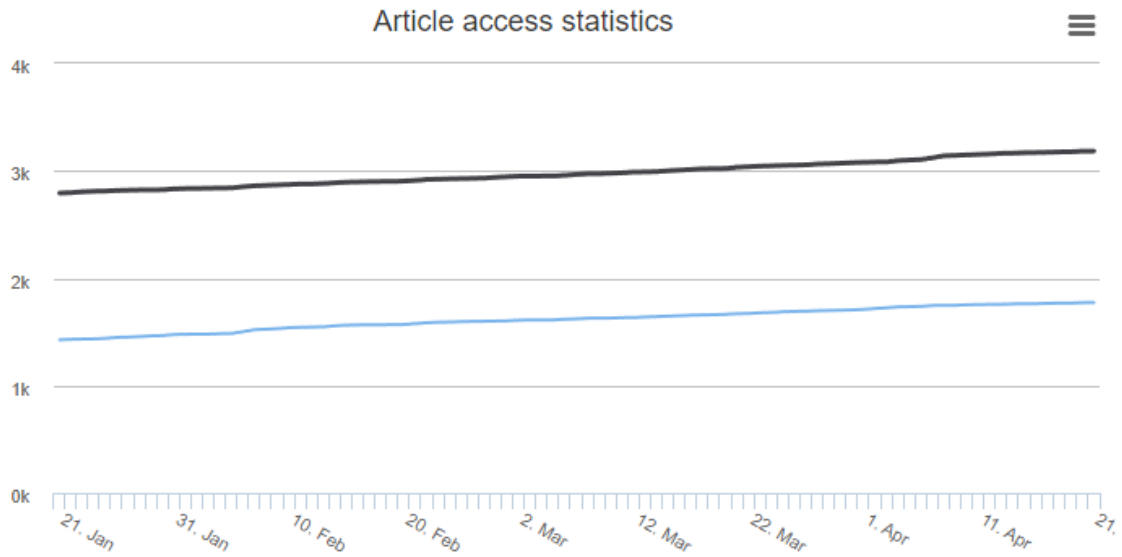

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From CropBooster-P to the CropBooster Program(2)

- The layout we have in mind for the program is similar to the FET Flagships:
  - Carried out by a pan-European consortium of approx. 100 partners
  - As core consortium, Photosynthesis 2.0 + CropBooster-P + CAPITALISE might serve.

Potential core-consortium for the CropBooster Program

UK
- Queen Mary University of London
- Imperial College London
- University of Leeds
- University of Essex
- **Lancaster University**
- **University of Nottingham**
- University of Cambridge
- James Hutton Institute
- **Ceratium**

Denmark
- **University of Copenhagen**

Sweden
- Umeå University
- Uppsala University

Finland
- University of Turku

Lithuania
- Vilnius University

Estonia
- Estonian University of Life Sciences

The Netherlands
- **Wageningen UR**
- VU University Amsterdam

Belgium
- University of Liege
- **VIB**
- **EPSO**
- **Euroseed**
- **ETP Plants for the Future**

62 institutions from 18 EU member states or associated states

Germany
- **Heinrich Heine University Dusseldorf**
- LMU Munchen
- Forschungszentrum Jülich
- MPIMP Golm
- **Julius Kühn Institute**
- **IPK**
- **University of Potsdam**

Switzerland
- ETH Zurich
- University of Zurich
- University of Neuchatel
- University of Lausanne

France
- CEA Cadarache
- CEA Saclay
- CEA Grenoble
- **INRA Montpellier**
- **Institut de Biologie Physico-Chimique - CNRS**
- Station Biologique de Roscoff – CNRS
- **ACTA**
- **Sorbonne University**

Czech Republic
- University of South Bohemia
- CEITEC
- ELI-Beamlines

Hungary
- Biological Research Centre
- ELI-ALPS

Portugal
- Universidade nova de Lisboa

Italy
- **CNR**
- University of Verona
- ENEA
- CREA
- Politecnico di Milano
- ITT
- University of Padua
- **Scuola Superiore Sant'Anna**

Romania
- **Universitatae de Stiinte Agricole si Medicina Veterinara Cluj Napoca**

Spain
- Universidad de les Illes Balears
- Universitat Autonoma de Barcelona
- CREAF
- CSIC

Israel
- Hebrew University of Jerusalem
- **Volcani Center**
- **Ben-Gurion University of the Negev**

From CropBooster-P to the CropBooster Program(2)

- The layout we have in mind for the program is similar to the FET Flagships:
  - Carried out by a pan-European consortium of approx. 100 partners
  - As core consortium, Photosynthesis 2.0 + CropBooster-P + CAPITALISE might serve.
  - Run time of 10 yr
  - Overall budget ~ 1 billion euro.
  - Followed by another ~10 year period needed by industry to translate the outcome of the program into marketable products.
  - We thus need strong cooperation with industry from day 1 on.

From CropBooster-P to the CropBooster Program(3)

- The main problem we face is that the FET Flagship Instrument does not exist any more.
- The only large-scale EU funding instruments that currently might fit our purpose are Partnerships.
- Example: partnership on Agro-Ecology
- These are very hard to set-up:
  - Requires commitment and financial support of all EU member states
  - The EU will fund only 30 – 50% of the required budget
  - Budget can be up to several hundred million euro
  - Might requires (financial) support from (academic) institutions in these member states.
  - New Partnerships are not yet foreseen, a new possibility might occur in 2025 - 2027

From CropBooster-P to the CropBooster Program(3)

- The procedure to set-up a new Partnership is not clear, but will for sure require a lot of lobby work both at national level (government, funding organizations, academia) as at the level of Brussels (EU Commission, EU Parliament, SCAR, DG-RTD, DG-Agri, DG Sante, etc. etc.).
- In order to effectively organize such a lobby it is important that we keep our current CropBooster-P consortium together and even expand it.
- To this purpose, we have established a new EPSO Working Group: “Future Proofed Crops”

EPSO Working Group "Future Proofed Crops"

epso

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FUTURE PROOFED CROPS

Chairs:

Christine Raines, Andreas Weber, Francesco Loreto, Alain Gojon, René Klein Lankhorst

Aims:

- To form a platform for European plant scientist working in the field of future proofing crops

- To interact with the EU Commission and other EU bodies on matters pertaining future proofing of crops

From CropBooster-P to the CropBooster Program(3)

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- In order to effectively organize such a lobby it is important that we keep our current CropBooster-P consortium together and even expand it.
- To this purpose, we have established a new EPSO Working Group: "Future Proofed Crops".
- We plan to organize an event in October this year to officially present the CropBooster-P Roadmap to the EU-Commission.
- From then on, we should organize a national lobby in our home countries to get support for a new Partnership.
- How?? All ideas are welcome!


WE NEED
YOU!

CropBooster-P

The end?

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