



Plant Biologicals Network

Annual report 2020



A red tractor is shown from a side-front perspective, working in a lush green field. The tractor has a white roof and a tall white exhaust pipe. It is pulling a red implement, possibly a plow or harrow. The background consists of a dense line of green trees under a bright blue sky with scattered white clouds.

A plant biologicals hub in Southern Scandinavia

2020 has been a turbulent year! In the Plant Biologicals Network we embarked on a journey of expanding the network. We also started 2020 with a calendar bursting with activities and hopes for many valuable networking opportunities. It has, however, been a year of postponed activities and a shift to meeting online instead of in person because of COVID-19. The latter is of course a challenge for networking and for meeting new, potential collaboration partners in a coffee break or during a conference dinner. But we are optimistic in the network, and despite the challenges we have succeeded in onboarding a number of new members.

One of the things we also did in 2020 was to look a bit at the future. It is an exciting process because there is so much potential within the network, and the plant biologicals area is versatile and in many ways undiscovered. The steering group has identified the following areas as important for the network to focus on going forward: internationalization, green transition, test and regulation as well as education and entrepreneurship.

We are looking very much forward to unfolding these topics in 2021 and to create value for our members through virtual meetings and events until we can meet in-person again.

Svend Christensen

Chair of Plant Biologicals Network

Mette Walter

Vice-chair of Plant Biologicals Network

Activities 2020

Workshop: How can we include biostimulants in the national field trials program? | 10 March

An increasing range of biostimulants are already available to Danish farmers. However, very few biostimulants have been tested in the national field trials (Landsforsøgene®) for their effect on nutrient uptake/efficiency, tolerance to abiotic stress, and crop quality. SEGES and Technological Institute invited manufactures and distributors of biostimulants to discuss how the various products could be included in the national field trial program.



Plant Biologicals Network Symposium | 12 November

The annual symposium was held as a one-day, virtual event. The presentations touched upon topics such as IPM, grass endophytes, practical experiences with biologicals in the field, plant extracts for plant disease control, development of a test system for biostimulants and the integration of biocontrol agents and pollinators.

Workshop on regulation of plant biologicals | 15 December

PBN members were invited to discuss the current regulatory situation in Denmark and Europe for plant biologicals. Representatives from the Danish Agricultural Agency, the Danish Environmental Protection Agency, the Swedish Chemicals Agency and the European Biostimulants Industry Council participated in the workshop. The timing of the workshop was aligned with the Danish Agricultural Agency's preparation of new legislation on biostimulants in Denmark.

Participation in CEN standard working group | Ongoing

EU is the first governing body in the world to recognize plant biostimulants as a distinct category of agricultural inputs. The new European Fertilising Products Regulation entered into force on 15 July, 2019. The full application of the regulation (i.e. when the first CE marked biostimulants can be placed on the EU market) will be on 16 July, 2022. The network is directly supporting the participation of Aarhus University in the group to ensure better university representation, and several PBN members are also participating on behalf of their organizations.

Focus areas 2021-2023

During 2020 the PBN steering group identified four important focus areas for the network. They align with the overall network purpose: to create a knowledge and innovation network in Southern Scandinavia which will establish the region as a significant global plant biologicals hub. PBN aims to promote the use of plant biologicals as well as the awareness and knowledge exchange on research, innovation and regulations of plant biologicals. The combined effort will stimulate new business opportunities, improved agricultural production and education, and contribute to solve societal challenges in relation to agricultural production and the environment.



We are looking forward to developing these focus areas together with all network members in the years to come:

Green Transition

We believe that biological products for plant production can be an important part of the green transition to a more sustainable agriculture. Increased use of biological products and production methods will mean new opportunities for farmers and the biologicals industry to move towards a more climate and environmental friendly and resilient agricultural production. The aim of the network is to increase the awareness about biologicals as sustainable and green solutions for agriculture.

Test and regulation

A sound regulatory framework is essential for the increased use of biologicals. PBN wishes to contribute to a smooth policy development and to the process of setting up efficient regulatory approvals. This can be in the form of developing test designs for biological products and facilitating knowledge sharing on regulation and documentation of efficacy and safety of biologicals.

Education and entrepreneurship

The network will focus on ensuring availability of skilled employees in research as development of biologicals. We will work on getting better coverage of biologicals in university education programmes, advancing business PhDs and postdocs as well and increasing MSc projects with the industry. PBN wishes to carry research results from the universities to the industry and to agricultural schools and gymnasiums.

Internationalization

The Plant Biologicals Network is geographically situated in Southern Scandinavia and has Danish and Swedish members. The outlook of the network is, however, international. In the years to come we will focus on expanding out international collaborations both in Europe and globally, and initiating collaboration with other biologicals stakeholders and initiatives.

Join the network

The Plant Biologicals Network is open for new members. Members can be companies, industry organizations, educational institutions, research and technology institutions, public authorities, interest groups or other organizations with relation to the plant biologicals sector.

As a member you will get access to all PBN events and influence on the network's activities.

The yearly membership fee is based on the amount of employees working with plant production in the organization. You can find an overview of the current membership fees here:

<http://plantbiologicals.dk/members/become-a-member/>

Please contact network coordinator Lene Rasmussen lr@plen.ku.dk / +45 30449952 if you would like to learn more about the network or become a member. www.plantbiologicals.dk



Organization

The Plant Biologicals Network is organized as a member association, with a steering group of 12 members. The yearly general assembly for all members is the highest authority of the collaboration. The network secretariat is located at the Department of Plant and Environmental Sciences at University of Copenhagen.

See the network bylaws on our website www.plantbiologicals.dk

Core members

| Aarhus University | Chr. Hansen | Novozymes |
University of Copenhagen | Bayer | SEGES |
Swedish University of Agricultural Sciences |
| Danish Technological Institute | FMC |







Ordinary members

| UCL University College | Lund Universitet | BioScience Solutions |
chart Biotech | Syngenta | Manna Regulatory |
Ingleby Farms | Azelis Denmark | EWH BioProduction |
Danske Kartoffler | Borregaard BioPlant | BJ Agro | Danish Golf Union |
Danish Crop Protection Association | Agrolab |

How do we define plant biologicals?

Plant Biologicals are naturally derived products that can serve as biostimulants, biocontrol agents, resistance inducers or biofertilizers. They derive from naturally occurring microorganisms, plant extracts or other organic matter, including:

- macrobials (predators and parasitoids: e.g. mites, spiders, lady beetles and wasps)
- microbials (bacteria, fungi, oomycetes and vira)
- biologically derived products (plant extracts, lipopeptides and proteins)

	Macrobials	Microbials	Biologically derived
Biostimulants			
Biocontrol agents			
Inducers of resistance			
Biofertilizers		