



CEPLAS

Cluster of Excellence on Plant Sciences

CEPLAS – Cluster of Excellence on Plant Sciences SMART Plants for Tomorrow's Needs

Aims of the cluster:

CEPLAS is the only German Cluster of Excellence focusing exclusively on plant science. Arable land, water and nutrients become scarce, while the climate is changing and the world's population is further increasing. To ensure a sustainable supply with food, feed, and plant-based raw materials, innovative strategies for crop improvement are required.

CEPLAS addresses these grand challenges through world-class fundamental research on complex plant traits of agronomic relevance that impact on yield and adaption to limited resources. This knowledge is essential for designing and breeding plants that react in a predictable way to future challenges.

Research:

The interdisciplinary approach of the cluster focuses on four different research areas:

- Optimizing Plant Performance by Mapping the Interface between Development and Metabolism
- Plant Microbiota Metabolic Networks and Edaphic Adaptation
- Synthetic and Reconstruction Biology
- Theoretical Plant Biology and Data Science

Additionally, CEPLAS has established a „Plant Metabolism and Metabolomics Facility“

Methods:

Synthetic Biology, Evolutionary Genetics and Genomics, Quantitative Biology, Interdisciplinary Approaches of Theoretical and Experimental Biology

Partner Institutions:

Heinrich Heine University Düsseldorf, University of Cologne, Max Planck Institute for Breeding Research Cologne, Forschungszentrum Jülich

Funding programme:

Excellence Strategy of the German federal and state governments.

Funding period: 2019-2025

Funding: € 42 million

Promotion of young researcher:

- Bachelor Programme in Quantitative Biology
- CEPLAS Graduate School
- Structured Postdoc-Programme
- Support for Junior Research Groups

Contact

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