

## BIOECONOMY RESEARCH PROGRAM BADEN-WÜRTTEMBERG

### Foundation

- 2013

### Network

- 13 Institutions
- Ca. 200 Researchers

### Research Areas

- Biogas
- Lignocellulose
- Microalgae
- Modeling the Bioeconomy
- Social-scientific accompanying research

### Integrative Activities

- Coordination Office Bioeconomy Research Program
- Graduate Program BBW Forwerts

### Website

<http://www.bioeconomy-research-bw.de>

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Baden-Württemberg

MINISTERIUM FÜR WISSENSCHAFT, FORSCHUNG UND KUNST



## Shaping the future with bioeconomy

Baden-Württemberg's universities and research institutions collaborate in three research areas and the competence network to develop new concepts and technologies, which use biomass instead of fossil resources and ensure global food security. The research program implements Baden-Württemberg's systemic research strategy for bioeconomy and is funded by the Ministry of Science Research and Arts since 2014.

A coordination office located at the University of Hohenheim provides support with project management, external and internal communication and represents the operative unit of the program's steering committee.

The program focuses on the research areas:

### **Biogas – Sustainable and flexible value-added chains in Baden-Württemberg**

- New and optimized technologies for biomass production, conversion and use
- Potential of biogas production in context of new German legislation (EEG 2014)
- Modeling of food- und non-food markets (including other regenerative energy and bioenergy production)



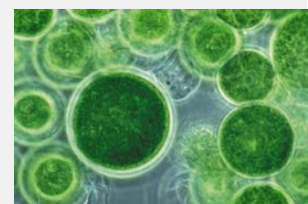
### **Lignocellulose – Alternative resource platform for new materials and products**

- Biomass from agriculture and forestry: selection, breeding, cultivation and harvesting
- Impact of biomass production on ecosystems
- Efficient conversion and preparation techniques
- Development of new processes and products derived from cellulose- and lignin fractions
- Systemic analysis of value chains



### **Microalgae – Integrated use for food and feed**

- Resource saving production of proteins and essential fatty acids in microalgae
- Optimization of cultivation, harvesting and processing
- Functionality in food technology
- Nutrition physiology
- Sustainability assessment, consumer acceptance, economic modeling



## BIOECONOMY RESEARCH PROGRAM BADEN-WÜRTTEMBERG

### Partners

**BIOPRO Baden-Württemberg  
GmbH**

**Centre of European  
Economic Research GmbH  
(ZEW)**

**Dialogik GmbH**

**DVGW-Research Centre /  
Engler-Bunte-Institute**

**Forest Research Institute  
Baden-Württemberg**

**Fraunhofer Inst. Chemical  
Technology (ICT)**

**Karlsruhe Institute of  
Technology (KIT)**

**Max Rubner-Institute**

**University of Freiburg**

**University of Heidelberg**

**University of Hohenheim**

**University of Stuttgart**

**University of Tübingen**

**University of Ulm**

**University of Applied Forest  
Sciences Rottenburg**

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### Competence network modeling the bioeconomy

With an increasing demand of biomass worldwide, competition between the production of food, feed, energy and other materials will increase. The competence network aims to analyze and evaluate potential biomass value chains for their direct and indirect economic and ecologic impacts. Technological and economic simulation models at various aggregation levels will be adapted, combined and applied.

- Farm-, agricultural sector and economic models
- Modeling of energy systems and biomass conversion plants
- Models for ecological impact and life cycle analysis



### Social-scientific and ecological accompanying research

The impact on ecosystems and health, as well as consumer acceptance of new technologies and products will be addressed in partner projects using methods from the social sciences and ecology.



### BBWForWerts Graduate Program

For the young scientists involved the integrated graduate program provides an interdisciplinary curriculum and networking opportunities through:



- Summer schools
- Workshops
- Method courses
- Excursions

The aim of this 3-year program is to qualify future bioeconomy experts to work on multifaceted challenges as well as to do independent research in their specific fields. International collaboration is fostered by integrating international PhD students into this program with English as the working language. Further information is available at [www bbwforwerts.de](http://www bbwforwerts.de).

### Coordination

The various areas of the research program interact via the steering committee, which develops strategic goals of the research program and coordinates the scientific activities.



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