Agriculture of the future
environmentally friendly. productive. digital. knowledge-based.
MISSION

»Mission of ZALF is to deliver solutions for an economically, ecologically and socially sustainable agriculture – together with society.

As a contribution to overcoming global challenges such as climate change, food security, biodiversity conservation and resource scarcity, we develop and design crop systems, integrated in their landscape contexts, that combine food security with sustainability. Therefore we process complex landscape data with a unique set of experimental methods, new technologies and models as well as socio-economic approaches.

ZALF research is an integrated systems research: starting from processes in soils, plants and water to causal relationships on the field and landscape level as well as looking at global impacts and complex interactions between landscapes, society and economy.«
In contrast to natural landscapes, agricultural landscapes are characterized by both their use as well as their users. Research at ZALF therefore covers not only economically and ecologically sustainable management strategies, but also societal demands on agricultural landscapes. Thus, solutions are generated that address the grand challenges facing society as a whole: climate change, sustainable land use, food security and the conservation of natural resources, biodiversity and ecosystem services.

Three Research Areas, two Research Platforms and an Experimental Infrastructure Platform provide the necessary disciplinary excellence and technical infrastructure.
Research Area 1 »Landscape Functioning«
How do agricultural landscapes function?

Research activities in Research Area 1 »Landscape Functioning« focus on biophysical landscape processes in order to generate an integrated understanding of their importance and their interactions in the landscape context. Special emphasis is placed on carbon and nutrient cycling as well as crop plants in their role as biological drivers of these cycles.

• Co-Heads: Prof. Dr. Michael Sommer
  Prof. Dr. Steffen Kolb

Research Platform »Data«

Agricultural landscape research requires and generates large sets of landscape data. The tasks of the Research Platform »Data« are thus the combination and provisioning of biophysical and socio-economic data at different structural, spatial and temporal scales as well as the continuous development of methods for analyzing large and complex datasets.

• Co-Heads: Prof. Dr. Gunnar Lischeid
  Prof. Dr. Frank Ewert (acting)
Research Platform »Models & Simulation«
It is the central objective of the Research Platform »Models & Simulation« to develop a coherent concept for modeling complex agricultural landscapes, which integrates different disciplinary models and modelling methods. Models of non-linear and dynamic systems are investigated and improved with modern methods of system theory. In addition, modelling activities in other working groups are technically and conceptually supported.
- Co-Heads: Prof. Claas Nendel
  Prof. Dr. Frank Ewert (acting)

Research Area 2 »Land Use and Governance«
How can we sustainably develop and shape intensively used agricultural landscapes?
Research Area 2 »Land Use and Governance« analyses the interactions between land use, ecosystems and ecosystem services. It is the aim to develop resource-efficient and site-specific production systems which account for the social and economic value of agricultural ecosystems for humans.
- Co-Heads: Prof. Dr. Sonoko Dorothea Bellingrath-Kimura
  Prof. Dr. Klaus Müller
In consideration of the spatial and system context, Research Area 3 »Landscape Research Synthesis« synthesizes results from Research Areas 1 and 2 and external knowledge sources into specific knowledge required for decision making. This makes integrated assessments possible, such as assessments of the effects of land use and climate change on food security and the provisioning of ecosystem services.

- Co-Heads: Prof. Dr. Katharina Helming
  Prof. Dr. Frank Ewert (acting)

The Experimental Infrastructure Platform integrates ZALF’s numerous field- and landscape-scale research infrastructures such as the Experimental Stations, the Landscape Laboratory »AgroScapeLab Quillow« and the landscape monitoring. In addition, the platform supports experimental research by, for example, operating and maintaining scientific instrumentation, conducting measurement campaigns and providing and managing experimental sites on grass- and croplands.

- Head: Dr. Gernot Verch
17 »Sustainable Development Goals« are the centerpiece of the Agenda 2030, approved in 2015 by the United Nations (UN). The Agenda lays a foundation for global economic development in accordance with social justice and within the ecological boundaries of planet earth.

Our research addresses the following Sustainable Development Goals:

- **Zero Hunger**: Goal 2
- **Good Health and Well-being**: Goal 3
- **Clean Water and Sanitation**: Goal 6
- **Affordable and Clean Energy**: Goal 7
- **Responsible Consumption and Production**: Goal 12
- **Climate Action**: Goal 13
- **Life Below Water**: Goal 14
- **Life on Land**: Goal 15
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Ressources & Infrastructure (status as of: 31 May 2019)
• 333 employees
• Total annual budget: approx. 28,1 Mio. €
  (from which 5,9 Mio. € are third party funding)
• Core financing by the Brandenburgian Ministry of Science, Research and Culture (MWFK) and the Federal Ministry of Food and Agriculture (BMEL)

• Interdisciplinary research teams
• Involvement in national and international networks
• Transdisciplinary, application-oriented research

• Systematic promotion of young researchers
• Family-oriented personnel management
• Scientific meeting centre

• Research infrastructure (Joint Lab): AgroScapeLab Quillow
• Platform for openly accessible landscape research data at ZALF: Open Research Data – http://open-research-data.de/

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