Project title	Robotics and Phenotyping for Sustainable Crop Production. CP5.1: New Field Arrangement. http://www.phenorob.de/
Acronym	PhenoRob
Contract period	01.01.2020 to 31.12.2024
Funding	Deutsche Forschungsgemeinschaft(DFG)
Contact staff at AOL University of Bonn:	Prof. Dr. Thomas Döring
Project aims	• Develop and adapt crop modelling and machine learning tools for application in diversified cropping systems such as crop mixtures and adapted field geometries ('new field arrangements') • Gain mechanistic insights into scale-dependent effects of crop diversification on multifunctional agroecosystem performance, as measured by a suite of different impact variables including yield, water and nutrient dynamics, resources use and use efficiencies, biodiversity (e.g. vegetation); • Demonstrate and evaluate the possibilities of new digitally based technologies (robotics, sensing) combined with crop modelling and machine learning to implement sustainable crop mixtures and new field arrangements.
Role of the Agroecology and Organic Farming group	• The INRES-AOL is responsible for the coordination of the overall project and the external presentation. • Field and practical testing at several locations
Project leader and partners	• Prof. Dr. Thomas Döring, University of Bonn • Prof. Dr. Frank Ewert, Prof. and head of the Crop Science Group and Scientific Director of Leibniz Centre for Agricultural Landscape Research (ZALF). • Prof. Dr. Cyrill Stachniss, Prof. and head of the Photogrammetry and Robotics Group, University of Bonn, IGG • Prof. Dr. Heiner Kuhlmann, Prof. and head of the Geodesy Group, University of Bonn, IGG