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SCIENCE FOR BIO-BASED ECONOMY AND SUSTAINABLE INTENSIFICATION – JKI AND ITS TASKS

La recherche pour une économie à base bio et une intensification durable – le JKI et sa mission / Wissenschaft als Grundlage für eine bio-basierte Wirtschaft und nachhaltige Intensivierung – das JKI und seine Aufgaben

ABSTRACT

The 21st century is characterized by major challenges. These include providing enough and healthy food for a growing global population with limited usable agricultural areas, the finite nature of resources of fossil origin, climate change, and the dramatic loss of biodiversity.

The “knowledge-based bioeconomy”, also referred to as a “bio-based economy”, offers the great opportunity both to make an important contribution to mastering these challenges and simultaneously to advance the transition from an economy mainly using fossil-based raw materials to an economy based on renewable resources and efficient in terms of raw materials.

Bioeconomy is the knowledge- and science-based production and use of biological resources to provide products, processes and services in all economic sectors within the frame of a sustainable system. The concept of bioeconomy takes natural cycles of materials as its point of orientation; it encompasses all sectors of the economy that produce, work and process, use, and trade with renewable resources, such as plants, animals, micro-organisms, and their derivatives.

With the National Research Strategy Bioeconomy 2030 and the National Policy Strategy – Bioeconomy, the German Federal Government has established the conditions for the vision of a sustainable bio-based economy.

The lecture focusses on the challenges for plant sciences and agricultural research to form the basis for a knowledge-based bioeconomy and a sustainable intensification of crop production. The complex underlying research issues provide incentives to work interdisciplinary, to cooperate internationally, and to accelerate the transfer of scientific findings and developments into practice.
