

## FIELD OF FOOD INDUSTRY



In this field it is necessary to focus especially on:

- providing reasonable ratio of food security and environmentally friendly growth of effectiveness
- elimination of food waste and edification in this field
- products of wide positive effects to environment
- introduction of new environmentally friendly technologies - high pressure, non-thermal plasma, membrane processes, biotechnology and nanotechnology
- processing secondary raw materials and food industry waste
- edible packaging (e. g. wraps).

## INNOVATION AND RESEARCH



Innovation and research help the development of the bioeconomical potential in all previous mentioned areas. Focus is needed to:

- searching for new alternatives of the nonrenewable resources and hardly decomposable materials (e. g. plastics)
- use of biotechnologies in agroforestry, agriculture (breeding or phytosanitary), food industry
- recovery and actualization of biological and ecological fundament
- sharing the information, innovations including consulting and application of scientific and research intentions
- Agriculture 4.0 (smart farming, precision agriculture)
- support of research and development heading towards better use of wood mass and searching for new product options in terms of using wood, research new possible ways during production of organic fertilizers by anaerobic processes
- new progressive bio-tech methods of plant and animal production, support of pollinators.

## Aims of Bioeconomy concept

The main objective of the Bioeconomy concept is to increase the efficiency of already implemented activities, increase their synergic effect through system management management tools and at the same time to ensure effective investment of public funds into research and related transfer of RDI (research, development, innovation) into practice, to bring the results which can be used for bioeconomy development in mentioned areas. To achieve these objectives, it is necessary to set up effective measures and control mechanisms.

### Key activity A: Reinsurance of steering and realization of the Bioeconomy concept on the national level

*Objective A1: Reinsurance of activity of the expert interdepartmental working group and Steering committee*

*Objective A2: Evaluation of Bioeconomy concept in the year 2025 and realization of Strategy of bioeconomy in the Czech Republic*

### Key activity B: Development support of bioeconomy in the Czech Republic with the use of international cooperation

*Objective B1: Together with the states of Visegrad Group seek for development of bioeconomy*

*Objective B2: Active cooperation in international expert working group dealing with bioeconomy*

### Key activity C: Reinforcement of the technological development and innovations

*Objective C1: Cooperation in the European research projects focused on bioeconomy*

*Objective C2: Transfer of research results and good practice towards stakeholders*

The concept is available in full and in the original (Czech) version on the official website of the resort [www.eagri.cz](http://www.eagri.cz)

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2019

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## BIOECONOMY CONCEPT IN THE CZECH REPUBLIC FROM THE PERSPECTIVE OF THE MINISTRY OF AGRICULTURE (2019-2024)



MINISTRY OF AGRICULTURE  
OF THE CZECH REPUBLIC

Ministry of Agriculture in the Czech Republic perceives the bioeconomy as a tool for reinsurance of the sustainable use of natural resources, respectively sustainable agriculture, forestry and aquaculture, food and feed production and amplification role of primary producers and their integration into the value chain of bioeconomy, as well on the side of forestry to involve whole value chain of following industry.

Concept resumes whole topic of bioeconomy and presents potential focus of future development of bioeconomy in the Czech Republic.

Due to complexity and wide focus of bioeconomy the potentials of development are solved for these topics:

### FIELD OF ECOSYSTEMS AND ECOSYSTEM SERVICES

It is necessary to focus especially on:

- sustainable use of natural resources
- mitigation of climate change
- comprehensive landscape development and creation
- recycling of bio-waste and its following use as (e.g. fertilizers, mulched material, biogas or bio-based fuel for transport purposes)
- improving soil structure, preservation of soil biological content, prevention of soil erosion
- breeding new variety of plants, that are resistant to stress and providing quality and high nutrition production of food from local sources



- protection and support of pollinators as a basic factor of production
- increasing stability and vitality of forest ecosystems, optimizing ecosystem services provided by forests
- reinforcement of environmental protection, resilient ecosystems, protection of surface and ground water, biodiversity preservation
- promoting the use of biotechnology.

### RURAL - SOCIAL AREA

In the rural social area the attention is paid notable to:

- sustainable tourism, green tourism (e.g. agrotourism)
- education in sustainable development
- recovery and growth of rural and suburban areas
- sustainable value chains of rural areas in industrial fields based on biotechnology and bioenergy
- circular economy offering opportunities for farmers and businesses in rural areas to diversity business, mitigate risks and ensure sufficient income
- sustainable development of bioeconomy in rural area as positive factor for solution of depopulation by creating job opportunities based on modern digital technologies and innovative business.



### ECONOMIC AREA

It is important to solve:

- development in the area of use of renewable resources, especially renewable energy sources
- introduction of innovative key technologies (e.g. nanotechnology, advanced materials, biotechnology etc.) into traditional fields (food production, timber production, construction, pharmacy etc.)
- use of secondary sources for production of new products
- effective and efficient use of biomass energy potential
- reinforcing role of primary producers in new value chains, support new breeding methods in terms with European legislation and rules for providing quality and high nutrition balanced food
- effective use of natural resources by better use of waste, including nutrient recovery
- maintaining and enhancing of low-inputs farming systems, changing the focus of agricultural production potential, stimulating non-food production
- protection and strengthening of high value of nature and permanent sustainable agriculture, which respects environmental demands
- development of cooperation including support of short distributors chains
- minimize inputs (e.g. work and energy), increasing effectivity and thrift economy (e.g. precision agriculture known also as Agriculture 4.0).

