



CENTRE FOR AGRICULTURAL RESEARCH

www.atk.hu/en

- Located in Martonvásár
- Member of the Eötvös Loránd
 Research Network
- Hungarian Academy of Sciences
 Centre of Excellence
- Institutional membership in international organizations
- 440 employees of which 213 researchers
- 383 publications (2020)
- 9007 citations (2019)
- Impact Factor: 599.6

The **Centre for Agricultural Research** is open to further joint research activities at the international level.

For any additional information on possible international cooperation please contact Mr. Zoltán DIVÉKI PhD at diveki.zoltan@atk.hu.

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The work of the **Centre for Agricultural Research** is aimed at carrying out basic and applied research and development in the field of agricultural and environmental sciences and at disseminating scientific and professional knowledge.

The scientific institutes making up the research centre are involved in research in the following fields:

- crop production, plant breeding and agronomy
- plant protection
- soil sciences

Agricultural Institute

The basic aim of the Institute is to use the internationally renowned germplasm accumulated in Martonvásár for more than seventy years, combined with up-to-date methods from the fields of genetics, physiology, cell and reproduction biology, functional genomics, biotechnology, plant breeding and crop production, in order to develop new, generic plant genotypes with excellent quality traits promoting healthy human nutrition and animal feeding, and improving food safety. The Institute carries out research on production technologies and studies the effects of climate change,







correlations between crop production factors and the sustainability of agro-ecological systems.

Plant Protection Institute

The Institute covers all aspects of the multidisciplinary field of plant protection research, and focuses on the biology of plant pathogens, arthropod pests and weeds, the physiology and biochemistry of plant resistance to diseases and abiotic stress factors, the interactions between plant pathogens and pests and their natural antagonists, opportunities for biological control methods in plant protection, and the development of environmentally safe pesticides. In addition to agricultural fields, the Institute has long been involved in solving plant protection problems in forestry, natural reserves and urban areas.

Institute for Soil Sciences

The Institute focuses interon and multidisciplinary research tasks related to the between interactions soils and the environment, e.g.: water, material and energy circulation in soils, quantitative and qualitative changes of soil organic matter, exploration of soil microbial and macro level communities, spatial and temporal modelling of properties, processes, functions and services of soils, use of soil biomass for environmental indication purposes, and support of circular economy objectives by the utilization of bio-waste and sewage sludge suitable for soil improvement or alternative nutrient replenishment.

Human resources

In the Centre for Agricultural Research the average number of employees was 440 in 2021, of which the number of researchers was 213. 50% of the researchers were women. 7

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researchers were Full or Corresponding Members of the Hungarian Academy of Sciences, 21 scientists held the title of Doctor of the Hungarian Academy of Sciences, and 121 co-workers had a PhD or were doctoral candidates. The rate of young researchers (under the age of 35 years) was 27%.

Institutional memberships

- European Association for Research on Plant Breeding – EUCARPIA
- International Network of Soil Information Institutions – INSII
- Global Soil Partnership GSP

List of articles on the main achievements of the Centre in 2020

- Chromosome

 –nuclear envelope tethering –
 a process that orchestrates homologue
 pairing during plant meiosis? (link)
- Ensemble modelling of carbon fluxes in grasslands and croplands (link)
- Improving trapping methods for buprestid beetles to enhance monitoring of native and invasive species (<u>link</u>)
- Biological and molecular evidence for the transmission of aster yellows phytoplasma to French marigold (*Tagetes patula*) by the flatid planthopper *Metcalfa pruinosa* (link)
- Updated European hydraulic pedotransfer functions with communicated uncertainties in the predicted variables (euptfv2) (link)
- Elaborating Hungarian segment of the Global Map of Salt-affected Soils (GSSmap): National contribution to an international initiative (link)

