

Education & RTD activities of the Faculty of Agricultural and Food Sciences and Environmental Management

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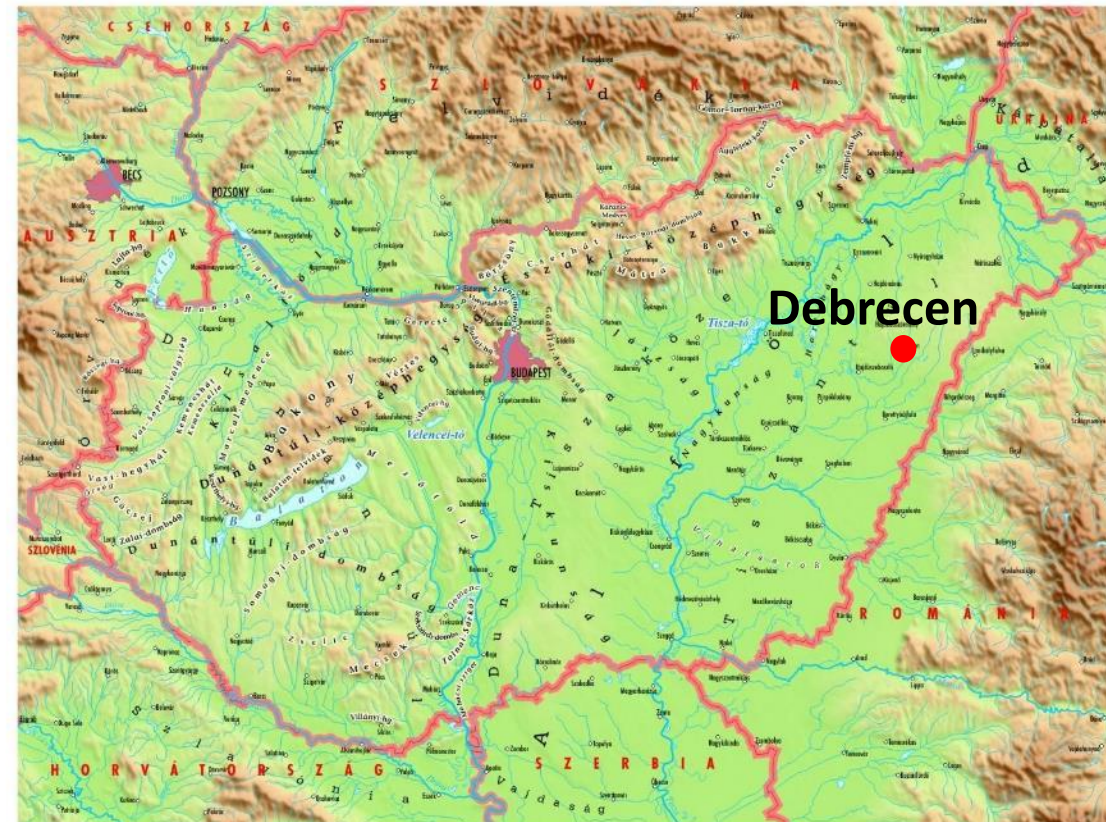


Background

- **Agricultural/rural region** accounting for 22, 23 and 60% of the total arable lands, animal husbandry and horticulture of Hungary, resp.
- **Skilled human resources** along the whole production chain;
- 19% of the national **agro-food GDP** is generated in the region;
- Beyond raw material production, the **food processing capacity** has always been significant, as well;
- Agro-food heritage & modern technologies.



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Faculty of Agricultural and Food Sciences and Environmental Management

Some basic data:

- Students: 1.500+, incl. 130+ foreign (2022/23)
- 3 doctoral schools
- Staff: 230 (Educ.: 110 -> 95 with degree)

Among the **World TOP 200 - 300**

Agriculture Faculties
(2015 - 2022)



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Institutes:

- Agricultural Chemistry and Soil Science
- Animal Science, Biotech. and Nature Cons.
- Crop Production and Agricultural Botany
- Food Science
- Food Technology
- Horticulture
- Land Use, Engineering & Precision Farming
- Nutrition Science
- Plant Protection
- Water and Environmental Management

Centres:

- *Agricultural Laboratory*
- *Agriculture Genomics & Biotechnology*
- *Precision Plant Production RTD & Services*
- *Complex Systems & Microbiome Innovations*
- *Agri-Food Technology Transfer*

155 years of higher education in agriculture

B.Sc. courses

- Agricultural science
- **Food engineering***
- Game management
- Horticulture
- Horse breeding and Equestrian Sports
- Nature protection management
- *Precision agriculture (Sept.2023)*

*Since 2015 September: Dual Education & Training Programme (university – agro-industry cooperation in vocational training)
(Master equivalent)*

Master courses

- **Animal husbandry***
- Crop production
- **Environmental management***
- **Food safety and quality***
- Horticulture
- Nature conservation & management
- **Plant protection***
- **Water management engineering***

**: courses also available in English*



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Since 2016 September:

Undivided (5 year) training in Agriculture (Master equivalent)

Educational farms & research facilities

Central Campus (Debrecen)

Greenhouses



Aquaculture & aquaponics



Food processing plant



Animal farm (Debrecen, Kismacs)



Arable farm (Debrecen, Látókép)



Horticulture farm (Debrecen, Pall)



RTD mission statement of the Faculty

*„Improvement of the health status of the European population and decreasing the presence/occurrence of diseases affecting large populations via **development of healthy and safe food in a sustainable environment.**”*

Main focus areas of RTD and innovation

① Healthy food

Safe & traceable food and feed having special quality features for promoting human and animal health

② Healthy environment

Precision agro-technologies, environmental sustainability & adaptation to climate change, based on renewable energy from agricultural by products



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Strategic areas

1. Future Farming, 2. Biobased industry
3. Agri-ecosystems, 4. Molecular agriculture

Strategic RTD areas / topics

1. Site and variety specific precision arable farming & horticulture including integrated plant protection technologies



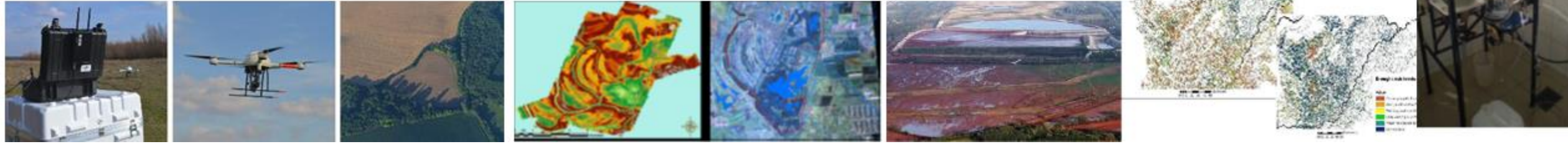
2. Precision animal husbandry & animal nutrition



3. Development of safe and traceable food processing technologies and special quality & health promoting foodstuffs



4. Integration of agri-environmental schemes, nature conservation and renewable energies into agriculture



5. Development of energy saving and environment friendly technologies to mitigate negative effects of climate change



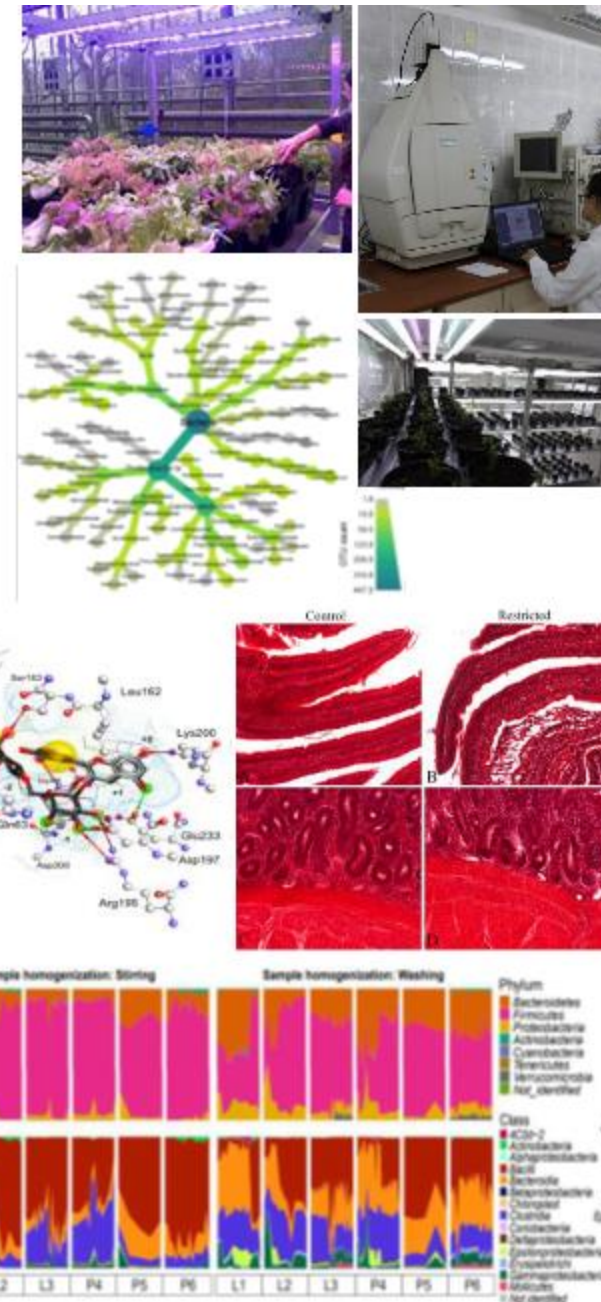
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EGYETEM**

Possible areas of cooperation

- **Resource efficient** plant and animal production **technologies**: plants: indoor & vertical farming, plant biotechnology, stress resistance, etc. animals: molecular biomarkers, proteomics, gene expression, resistance
- Development & testing of **functional food prototypes**: bioactive components, microbiome integrity, nutrigenomics, etc.)
- Utilisation of **renewable energy** sources of agricultural origin: e.g. biomass, by-products
- Development of technologies adequate to **climate change**
- **Agri-environmental programmes** in agricultural production (e.g. biodiversity enhancement)



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Thank you for your attention

Further information:

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