

# THESIS TOPICS AND SUPERVISORS

from

2025/2026 academic year

## INSTITUTE OF PLANT SCIENCES AND ENVIRONMENTAL PROTECTION

**Dr. habil. Tamás MONOSTORI** - [monostori.tamas@szte.hu](mailto:monostori.tamas@szte.hu)

- Plant cell and tissue culture (sweet potato, ornamental plants, etc.)
- Comparison of production/seed production of arable and horticultural crops between a given country and Hungary
- Fish farming, aquaculture, aquaponics

**Prof. Dr. Szilárd CZÓBEL** - [czobel.szilard.endre@szte.hu](mailto:czobel.szilard.endre@szte.hu)

- Examination of the production of grasslands in a given region and the main factors affecting productivity

**Dr. habil. Ferenc LANTOS** - [lantos.ferenc@szte.hu](mailto:lantos.ferenc@szte.hu)

- Studying of the bioactive substances of the vegetables, fruits and herbs

**Dr. Balázs DURAY** - [duray.balazs@szte.hu](mailto:duray.balazs@szte.hu)

- The practical importance of remote sensing applications (satellite and drone) in precision agriculture
- Exploring the potential of remote sensing assisted precision crop and livestock production, testing the economics and ecology of these applications
- Agro-photovoltaic systems and their role in climate-smart agriculture
- Drone-based wildlife and crop monitoring methods in precision agriculture
- Biochar and pyrolysis technologies for sustainable rural development

**Dr. habil. Viktor VOJNICH** - [vojnich.viktor.jozsef@szte.hu](mailto:vojnich.viktor.jozsef@szte.hu)

- Cultivation of medicinal herbs
- Crop management programme for arable crops (nutrient supply, plant protection)
- Pollen measurement of invasive, allergenic plants
- Weed biology and weed control

**Dr. István SISÁK** - [sisak.istvan@szte.hu](mailto:sisak.istvan@szte.hu)

- Analysis of soil related yield differences within a field using satellite image data
- Analysis of maize vegetation indices in agricultural landscapes using satellite image data
- Analysis of winter cereal vegetation indices in agricultural landscapes using satellite image data

- Validating FAO AquaCrop model for a crop field
- Use of multispectral and thermal drone images for crop monitoring
- Use of multispectral and thermal drone images for soil monitoring
- Contemporary intercropping practices: agronomic and economic evaluation (consultation together with Dr. habil. József Horváth)
- Use of legacy soil maps in the digital era

**Dr. Melinda TAR** - [tar.melinda@szte.hu](mailto:tar.melinda@szte.hu)

- Comparision of Hungarian and foreign crop production technology
- Description and analysis of cultivation technology of a crop from one's own country
- Examination of the various agrotechnical reactions of crops – field and laboratory work at Faculty together with teacher (plant variety effect, nutrient and biostimulator treatment, plant protection, plant number reaction)
- Effect of tillage methods on the biological properties of the soil

**Dr. Adrienn SZARVAS** - [szarvas.adrienn@szte.hu](mailto:szarvas.adrienn@szte.hu)

- Development of sweet potato cultivation technologies
- Plant protection problems of sweet potato production
- Plant protection problems of tomato production

**Dr. László MAKÓ** - [mako.laszlo@szte.hu](mailto:mako.laszlo@szte.hu)

- Soil laboratory tests
- Sampling methods
- Waste management in animal production
- Waste management in plant production
- Waste management in circular economy

**Flórián KOVÁCS** - [kovacs.florian@szte.hu](mailto:kovacs.florian@szte.hu)

- Application of bioimpedance spectroscopy in detecting water deficiency in plants
- Role of bioimpedance spectroscopy in monitoring nitrogen status in plants
- Significance of bioimpedance spectroscopy in plant physiology research – a literature review

**Ingrid GYALAI** - [gyalai.ingrid.melinda@szte.hu](mailto:gyalai.ingrid.melinda@szte.hu)

- Pepper (capsicum) growing, nutrient supply, seed production
- Vegetable production
- Ornamental plant growing
- Medicinal herbs and spice plants)

## INSTITUTE OF ANIMAL SCIENCES AND WILDLIFE MANAGEMENT

**Dr. habil. Edit MIKÓ + Violetta TÓTH** - [miko.edit@szte.hu](mailto:miko.edit@szte.hu), [toth.violetta@szte.hu](mailto:toth.violetta@szte.hu)

- Milking production of Holstein-Friesian cow groups spring from different bulls
- Analysis of long life-capacity in a dairy cow population
- Maternal traits in a population of beef cattles
- Body condition scoring system of dairy cattles
- The connection of BCS and milk production of dairy cattles
- Analysis of BCS and reproductiveness of dairy cattles
- The growth of Holstein Friz heifers' live weight from birth until
- Analysis of the quality and quantity parameters of milk
- Effect of heat stress on performance and reproductive biology of dairy cows
- Investigating the reasons for culling dairy cows
- The evaluation of farms from an animal welfare point of view
- Questions of animal protection in connection with animal transportation
- Precision facilities in analysing the reproduction parameters of cattles
- Precision facilities in analysing the production parameters of cattles
- Precision solutions of animal health monitoring system of cattles
- Farm-managing systems in cattle breeding
- Analysis of environmental parameters in livestock production

**Dr. Orsolya KISS** – [kiss.orsolya@szte.hu](mailto:kiss.orsolya@szte.hu)

- Ecology and conservation of birds of farmlands and grasslands
- Nature Conservation management

**Wissem BACCOURI** – [baccouri.wissem@szte.hu](mailto:baccouri.wissem@szte.hu)

- The effect of heat stress on dairy cows

**Dr. George WANJALA** – [wanjala.@szte.hu](mailto:wanjala.@szte.hu)

- Effects of season on growth traits of sheep under tropical climatic conditions
- Sire effect on growth traits in sheep under tropical climatic conditions
- Effect of acute heat stress on behavior pattern of dairy cattle

## INSTITUTE OF ECONOMICS AND RURAL DEVELOPMENT

**Dr. habil. Levente KOMAREK** - [komarek.levente@szte.hu](mailto:komarek.levente@szte.hu)

- Rural development in the European Union
- Current issues in international agriculture

**Dr. habil. József HORVÁTH** - [horvath.jozsef@szte.hu](mailto:horvath.jozsef@szte.hu)

- Financial and economic analysis of agricultural firms
- Economic evaluation of agricultural resource management
- Enterprise budget analysis in plant cultivation, horticulture and animal husbandry
- Business planning in agriculture
- Optimization of competitiveness by controlling methods
- The role of logistics in profitable agriculture

**Dr. Anita CSIBA** - [csiba.anita@szte.hu](mailto:csiba.anita@szte.hu)

- Technological development of slaughterhouse by-product processing for petfood feed flours and fat
- High-keratin-content slaughterhouse by-products processing for petfood or cosmetics raw materials
- Effects of different processing methods for quality of pig slurry and poultry manure and ammonia emission
- Examination of the different thawing solution's effects for the quality of deep frozen ram semen

**Dr. Sabri Alipanah** – [sabri.alipanah@szte.hu](mailto:sabri.alipanah@szte.hu)

- Effects of monetary policy on agricultural commodity prices
- Exchange rate volatility and agricultural export performance
- Farm credit markets and interest rate cycles
- Impact of interest rate changes on agricultural production costs
- How inflation influences farmers' input purchasing decisions
- Effects of monetary tightening on agricultural credit access
- Public debt levels and their implications for agricultural subsidies
- Effects of GDP growth on demand for agricultural goods

**It is necessary to discuss the chosen topic with the supervisor in advance!**