

# **THESIS TOPICS AND SUPERVISORS**

**from**

**2024/2025 academic year**

## **INSTITUTE OF PLANT SCIENCES AND ENVIRONMENTAL PROTECTION**

### **Dr. habil. Tamás MONOSTORI**

- 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**

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

### **Prof. habil. Ferenc LANTOS**

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

### **Dr. Balázs DURAY**

- 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

### **Dr. László SALLAI**

- Analysis of biomass energy utilization in case of a specific plant
- Examination of solar energy utilization in the case of a specific plant
- Examination of the utilization of geothermal energy in case of a specific plant
- Biogas production and utilization in case of a livestock farm
- Energetic utilization of agricultural by-products
- User experiences related to different attached machinery

### **Dr. Viktor VOJNICH**

- 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**

- 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)

### **Dr. Melinda TAR**

- Comparison 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**

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

### **Dr. László MAKÓ**

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

### **Flórián KOVÁCS**

- 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**

- 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**

- 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**

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

### **Wissem BACCOURI**

- The effect of heat stress on dairy cows

### **Dr. George WANJALA**

- Effects of season on growth trains 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**

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

### **Dr. habil. József HORVÁTH**

- 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**

- 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

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