



# Study Tours

EURACADEMY ASSOCIATION'S 20<sup>TH</sup> SUMMER ACADEMY

**"CHANGING FARMING PRACTICES TO ADDRESS THE CLIMATE CRISIS"**

INCLUDING THE TRAINING OF TRAINERS ACTIVITY OF THE REGINA PROJECT (FUNDED BY ERASMUS+)

GYŐR, HUNGARY,

27<sup>TH</sup> TO 31<sup>ST</sup> AUGUST 2023



## **“Study Tours” of the Summer Academy, 30<sup>th</sup> August (Wednesday)**

During the Study Tours, we will have the opportunity to elaborate on the theme of the summer academy through examples that we can visit in the wider area of Győr and the region of West-Hungary. The Study Tour forms a “peak” in the learning process and is a chance for all participants to draw together their previous knowledge and experience, with the ideas and questions that have been raised during the first days of the Summer Academy.

*The Study Tours* will be planned in groups of 8-9 people and each group will go to a different study tour site. During your study tours you will visit sites relevant to the themes of the Summer Academy. Your task is to listen carefully, share your impressions and discuss with them how things could be made better, more efficient and sustainable. This way you will be able to address actual problems, activities and ideas and contribute with your impartial point of view.

During the study tours, we are going to adopt a stronger emphasis on “problem solving - finding solutions” and give a higher profile to the study visit investigations and greater importance to meetings with the communities. The study tours will be shaped as topic-specific case studies to investigate real community-based challenges. The participants will be tasked to explore these challenges and identify and present real potential solutions during the summer academy. In this way, we hope participants will be able to develop their skills of community-based investigation/appraisal, analysis and solution/action plan presentation.

The morning and early afternoon sessions of the fifth day will be devoted to the *Study Tour Reports*. For the planning and preparation of these reports you will be given some guidelines and background information, but the actual result depends on the group that will produce it. The groups are invited to approach the Study Tour as a small real-life project, and propose solutions and further action that can be also meaningful for the local stakeholders. You are advised to work with your Study Tour Report during the whole tour and finalise it during the Study Tour Report session. The reports will be presented by each group to the plenary of participants in the afternoon of Thursday 31<sup>st</sup> August.

*All tours will end in the lovely city of Mosonmagyaróvár, where you will have a little time to explore, and enjoy a dinner at the Castle of the city.*

## Study Tour 1

### Rábapatoná – Rábapordány - Rábcsakapi

Meeting point: Famulus Hotel & Kollégium

**8:30** Participants meet in front of the Hotel, departure

**9:00** Rábapatoná, Agrowald Kft. (Schmidt Péter)

*Adress: Rábapatoná, Rákóczi u. 107*

The young farmer, who operates his farm on 90 ha, lives in Rábapatoná in the Kisalföld. He learned the farming practices related to RA from the articles available on the Internet. He uses RA practices since 2015 in some of his areas, especially in field crop production. The main activity of the farm is growing field crops and other vegetables and fruits: strawberries, cherries, pumpkins, sweet corn, sweet potatoes. In his economy, there are many crops and green manure crops, he likes to grow nitrogen-fixing plants, he uses cover crops to preserve soil moisture, he turns the stem residues back into the soil to increase its organic matter content and improve its water retention capacity, and he also uses no-rotation tillage. These are all RA practices.

As a result of RA, crop yields improve, soils cultivated in this way have better water balance, are easier to cultivate, and therefore use less fuel. Cost-effectiveness is not only good for the farmer, but also for the environment. Overall, he is satisfied with the RA and will continue it in the future, as he sees its effect as favorable, but - as he mentions - these are long-term processes.

**11:00** Rábapordányi Agricultural Zrt. (Bóna Szabolcs)

*Adress: Rábapordány, Gévay Wolff Lajos u. 50*

Founded in 2000, Rábapordányi Agricultural Zrt., located in the heart of Rábaköz, covers an area of 1,100 ha. The main profile of the economy is livestock breeding. Farmer Szabolcs Bóna started introducing regenerative agriculture practices in part of their territory in 2012, which he learned by watching American video materials. The company has 82 permanent employees and 3 seasonal workers. He was the Animal Breeder of the Year in 2022. The main activity of the farm is animal husbandry (dairy cattle breeding, pig breeding, pig fattening), their crop cultivation is intended to provide the supply of livestock feed through the production of various field crops. On one hand, they started using regenerative practices in their farm to protect the soil, as it was clear from their soil test results that the humus content of the soil decreased even with organic fertilization. They wanted to reverse this process, and they succeeded! On the other hand, RA practices were needed due to the significant increase in cultivation costs. They were looking for ways to reduce costs without a significant decrease in yield.

Depending on the results, he would like to continue the practices of regenerative agriculture, as Rábapordányi Agriculture Zrt. tries to farm in an environmentally conscious way. It strives to reduce its energy consumption. During its operation, it complies with the legal framework for energy efficiency, which has recently increased in value both from the point of view of environmental protection and economics.

*13:00-14:00 – Lunch Break*

### **14:30 Biogarden (Rábcakapi)**

Their agricultural enterprise was established in the year 1993. Since then, they have been engaged in organic grain and field vegetable production, and since 2003, they have also been involved in apple cultivation. The love and respect for the land have been ingrained in their lives, providing the foundation to build their agriculture with dedication. Armed with the knowledge and expertise they acquired, they wholeheartedly embarked on their 20-hectare smallholding. As of today, their enterprise has developed into an organic farming sector, encompassing 250 hectares of land (30 for vegetables, 220 for grain), with the variety of crops expanding over the years. Through their efforts and successful endeavours, they have established extensive machinery and refrigerated storage facilities that meet current standards. Additionally, they possess a stone grinder and flaking machine, primarily used for processing their own cereals. The majority of their produce is supplied to the Eco Market in Budapest. Furthermore, they have established partnerships with Hungarian businesses such as HIPP, SPAR, as well as other smaller organic stores.

More info: <http://biokerteszeti.com/en/home>



**cca. 17:00    Arrival to Mosonmagyaróvár**

*Dinner at 19:00 in the Castle*

## Study Tour 2

### Kisbér – Nagyszentjános - Győrújfalu

*Meeting point: Famulus Hotel & Kollégium*

**8:30** Participants meet in front of the Hotel, departure

**9:00** **Biogáz Unió Zrt. (Kisbér)**

*Adress: Kisbér Vásártér u.*

The agricultural enterprise with 900 hectares of organic arable land is not only the largest in the region but also ranks among the larger organic farms nationwide. Currently, on these fields, they produce 1,000-1,500 tons of organic corn for consumption and milling, 1,200-1,600 tons of organic grains, and 350-500 tons of oilseeds and herbs.

Their goal is to realize a renewable energy-based circular model farm that produces healthy organic products from farm to fork. To promote circular farming, they also operate a biogas plant. The organic products are primarily sold in Germany, and they hold long-term sales contracts. They have 10 barns available for their pig farming/fattening activities.

More info: [www.biogazunio.hu](http://www.biogazunio.hu)

**11:00** **Kisalföldi Agricultural Zrt. (Nagyszentjános)**

*Adress: Nagyszentjános Fő u. 1.*

The company implement a circular farming system. In terms of crop cultivation, they engage in vegetable and grain farming, medicinal plant cultivation, as well as seed production. They started practicing organic farming in 2002 and currently operate on a total of 2000 hectares. The nutrient requirements of the soils are periodically supplemented through manure application, and they ensure yields and quality in organic farming by using only organic fertilizers.

The feeding of their dairy cows is achieved through the cultivation of silage corn, corn, alfalfa. Their milk production takes place at three major sites. Their Holstein-Friesian cattle population totals 5395, including 2750 milking cows, while the rest are young cattle and calves. Their goal is to achieve automated milking of the entire dairy cattle population through LELY-brand robots. The majority of their arable land is irrigable, with irrigation water sourced from the Danube. They operate two biogas plants based on cattle slurry and solid manure. Their mechanization is characterized by the use of cutting-edge machinery brands (Fendt, John Deere, Claas, JCB, RMH, etc.) and techniques. They operate pragmatically in precision agriculture, with a significant portion of their machinery equipped with RTK guidance and yield mapping.

More info: <http://kisalfoldi.hu/>



13:00-14:00 – Lunch Break

**14:30 Sudár Birtok (Győrújfalú)**

*Adress: Győrújfalú Berek u. 23.*

Sudár Birtok is a modern family farm based on traditional values. They believe in sustainable development, whereby the centuries of knowledge handed down by their ancestors can be regenerated by their efforts, and it can be transmitted to the generations to come.

On their sustainable farm of over six hectares, besides cultivating field crops, they are engaged in the growth of spices and herbs. Their aim is to create high-quality, clean food; hence, artificial fertilizers and chemicals are not employed. The soil is enriched with their own farm-made compost, and a biodegradable herbal mixture is used to combat pests.



At present, 17 types of plants are cultivated and processed. After manual harvesting, the drying of the plants occurs naturally in the attic. The process of crumbling is also done manually, and the packaging is done in-house, ensuring a closed system for the entire technological process. This allows them to maintain control over the entire process.

More info: <https://sudarbirtok.hu/en/>



**cca. 17:00 Arrival to Mosonmagyaróvár**

*Dinner at 19:00 in the Castle*

## **Study Tour 3**

### **Kajárpéc – Kimle – Hédervár**

Meeting point: Famulus Hotel & Kollégium

**8:30 Participants meet in front of the Hotel, departure**

**9:00 Miklós-major (Kajárpéc)**

*Address: Kajárpéc Miklós-major*

Major Béla has been farming in Kajárpéc for several decades. The farm grows field crops on roughly 350 ha. It mainly grows cereals and oil crops. It combines traditional methods (deep loosening) and new possibilities (cultivation of cover crops) in field crop production. He uses them primarily based on his own experience. In addition to growing crops, he also keeps horses.

Major Béla is also very active in the community life of agriculture. He is the general vice-president of the county organization of the National Chamber of Agricultural Economy and the county association of MAGOSZ (Farmers' Association). He is the head of the local Kajárpéc-Felpéc Farmers' Circle.

**11:30 Kimle Research Site (Kimle)**

Colleagues of the Széchenyi István University are implementing an international project called trans4num. The topic of the project is nature based solutions. Objective of the project is to develop and test innovative NBS practices and pathways that contribute to a socio-ecological transformation of existing intensive agriculture systems towards increasingly sustainable nutrient management.

What is happening in trans4num research site in Hungary?

- trans4num will conduct experimentations in three replications comparing the NBS innovations with conventional intensive farming systems.
- The trials will be conducted on a 20 ha land with three years rotation: durum wheat, sorghum and soya.
- trans4num will conduct the experimentation together with practice partners and local stakeholders on Mecsér experimentation sites.
- Soil quality after application will be tested using fast sensor-based technology to examine the effect of the NBS introduced on soil structure and organic matter improvement as well as yield improvement

Trial objectives:

- To examine the effects of tillage methods (tillage without rotation vs rotary tillage)
- To investigate the effect of variable seeding in the aspect of NBS
- Examining the effect of different cover crops
- Investigating the effect of green manure

Monitoring methods:

- Soil sampling and analysis with fast sensor-based technology
- Plant sampling and analysis

- Digging soil profiles to examine the effect on soil structure and life
- Using remote sensing technologies for crop health monitoring: NDVI measurements, drones, satellite images
- Yield monitoring - Yield meter on the combine
- Monitoring the effect on biodiversity (bird monitoring)

#### Output

- Creating a fact-based decision support system to implement NBS solutions
- Minimizing the negative environmental impacts of the production with NBS
- generating evidence for integrating nature-based solutions in national and local policies and agricultural development strategies.
- Optimizing the use of input materials based on monitoring data
- Changing the attitude of farmers in the Szigetköz area towards nature based solutions

More info: <https://trans4num.eu/hu/>

*13:00-14:00 – Lunch Break*

#### **15:00 Lajta Mag (Hédervár)**

The company we are going to visit has a history of 30 years. As a third-generation family business, it preserves and proudly carries forward the professional knowledge and experience of three generations. We engage in seed production on an annual basis, covering an area of 8,000 to 10,000 hectares. The Lajtamag group of companies has a nationwide network of agricultural producers, exceeding 400 on an annual basis. The portfolio of seed production primarily includes purple clover, red clover, oilseed radish, mustard, phacelia.

During the study trip, we will observe the breeding of a new hemp variety with a high CBD content at the Hédervár site. Within the scope of the project, the currently available hemp varieties are further developed due to their substantial research and development potential. The goal of the development is to create a variety that keeps pace with the growing medicinal utilization. Since the size of cultivable land is not expected to increase in the foreseeable future, the aim of this breeding and innovation is to produce the highest concentration substance on a unit of cultivable land. Hence, they are creating a hemp variety with the highest possible CBD content. The objective is to develop an enhanced hemp variety with a CBD content exceeding 4%.



**cca. 17:00 Arrival to Mosonmagyaróvár**

*Dinner at 19:00 in the Castle*