Learning from Mendel University: agricultural education, food security, and dairy production in the Czech Republic

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During a recent visit in early March 2026 to Mendel University in Brno as part of the HEROES alliance consortium meeting, SEAMK's representatives had the opportunity to explore how agricultural education, research, and practice intersect in the Czech Republic. Mendel University in Brno is named after Gregor Mendel, the "father of genetics", whose pioneering experiments with pea plants laid the foundation for the modern science of heredity (Encyclopaedia Britannica, n.d.).

The visit coincided with a seminar on food security, highlighting the growing importance of resilient and efficient agricultural systems in Europe. In this seminar Assoc. Prof Gun Wirtanen gave a presentation entitled Circular foodshift framework for the Baltic countries, which was prepared based on project results obtained in a project funded by Interreg Baltic Sea Region. Climate change, geopolitical uncertainty, and resource constraints challenge food systems, universities such as Mendel play a crucial role in training experts and developing practical solutions.

Assoc. Prof. Gun Wirtanen presenting the Circular FoodShift framework for the Baltic countries at the seminar, based on results from an Interreg Baltic Sea Region project (photo: Terhi Junkkari, 2026).

Experiential learning at the university farm

One of the key highlights of the programme was a visit to the university's experimental farm, which serves both as a production unit and a learning environment. The scale of operations was notable: the farmhouses approximately 1300 dairy cows and 700 calves. The average milk yield varies from 35 to 40 litres per cow per day, representing a good European level. For comparison, the average milk yield per cow in Finland is at a similar level (Valio, n.d.).

The farm operates without milking robots, relying instead on conventional systems and a workforce of 24 staff members. Milking is still carried out in a milking parlour rather than with robotic systems. This is partly a cost-related decision but also linked to training and educational purposes. In addition, the farm functions as an important training site, hosting students and trainees—ranging from a few individuals to as many as one

hundred per week depending on the season. This strong integration of education and production reflects the university's pedagogical approach.

Animal nutrition and resource use are carefully managed. Each cow consumes approximately 50 kg of feed per day and between 80 and 120 litres of water, depending on seasonal conditions. The farm produces its own feed on approximately 2300 hectares of land, demonstrating a high level of self-sufficiency. In addition to dairy cattle, the farm features around 15 different beef cattle breeds, offering a broad perspective on livestock production systems.

Karri Kallio from SEAMK getting a closer look at dairy cows during a visit to Mendel University's teaching farm (photo: Terhi Junkkari, 2026).

The visit was guided by Kristýna Tučková, who provided valuable insights into the farm's operations and its role in education and research. The day also included a guided tour of the university's central campus arboretum, which contains approximately 4500 plant species within an 11-hectare area, further emphasizing

the university’s strong focus on biodiversity and plant sciences.

The role of agriculture in the Czech Republic

Agriculture plays a significant role in the Czech Republic, particularly in crop production, dairy, and meat sectors. While the country is not among Europe’s largest agricultural producers, it maintains a high level of productivity and a strong tradition of agricultural education. Livestock production, especially dairy and beef, remains an important component of rural economies (Czech Statistical Office, 2024; European Commission, 2025; Ministry of Foreign Affairs of the Czech Republic, n.d.).

Overall, the visit to Mendel University highlighted how modern agricultural education can combine large-scale production, sustainability, and hands-on learning. The integration of teaching, research, and real-world farming practices offers a compelling model for addressing future challenges in food security and sustainable agriculture.

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