

# NDA Hungary

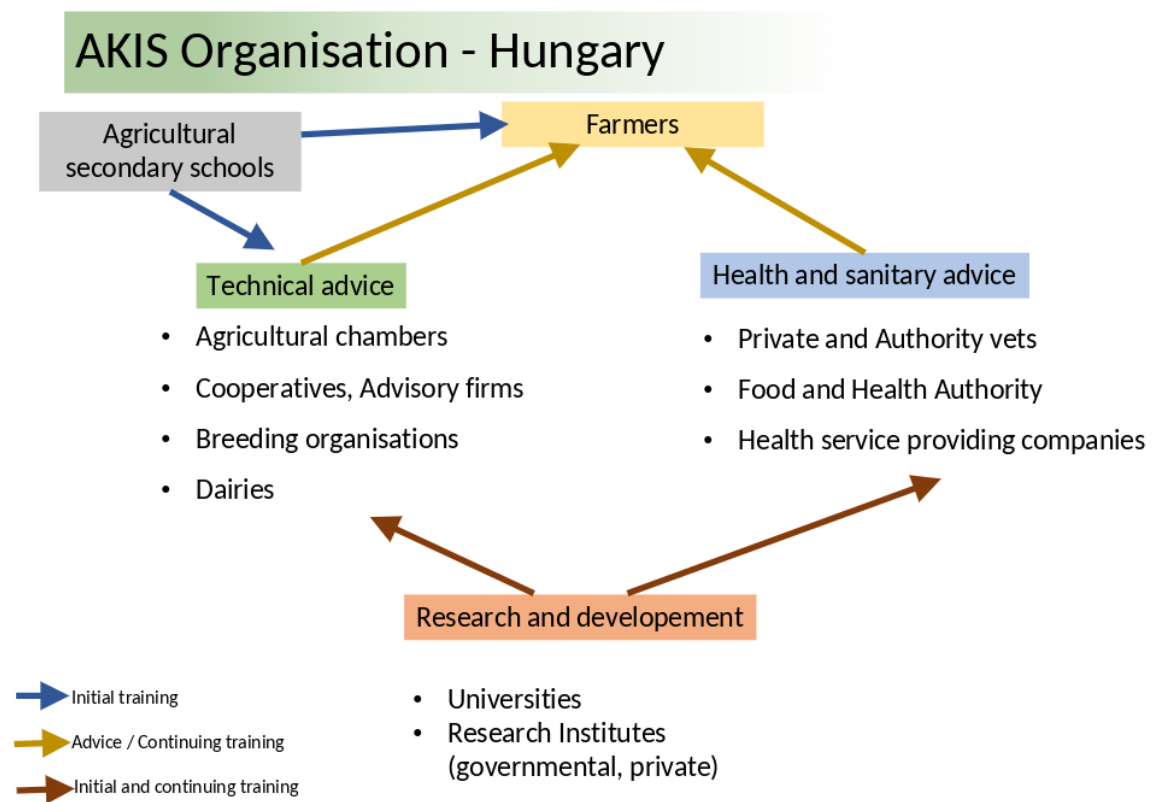


Figure 19. Dairy Agricultural Knowledge & Information System (AKIS) in Hungary

Hungary has a regional dairy AKIS that consists of 13 members (Figure 20):

- 6 pilot farms
- 1 higher education: University of Debrecen
- 1 advisor company: Sz-Consult Ltd
- 1 milk processor: Alföld Tej Ltd
- 1 technology supplier: Dairy Dave Ltd
- 3 breeding associations:
  - Hungarian Holstein Breeder's Association
  - Hungarian Simmental Breeder's Association
  - Hungarian Jersey, Guernsey, Ayrshire and Brown Swiss Breeder's Association

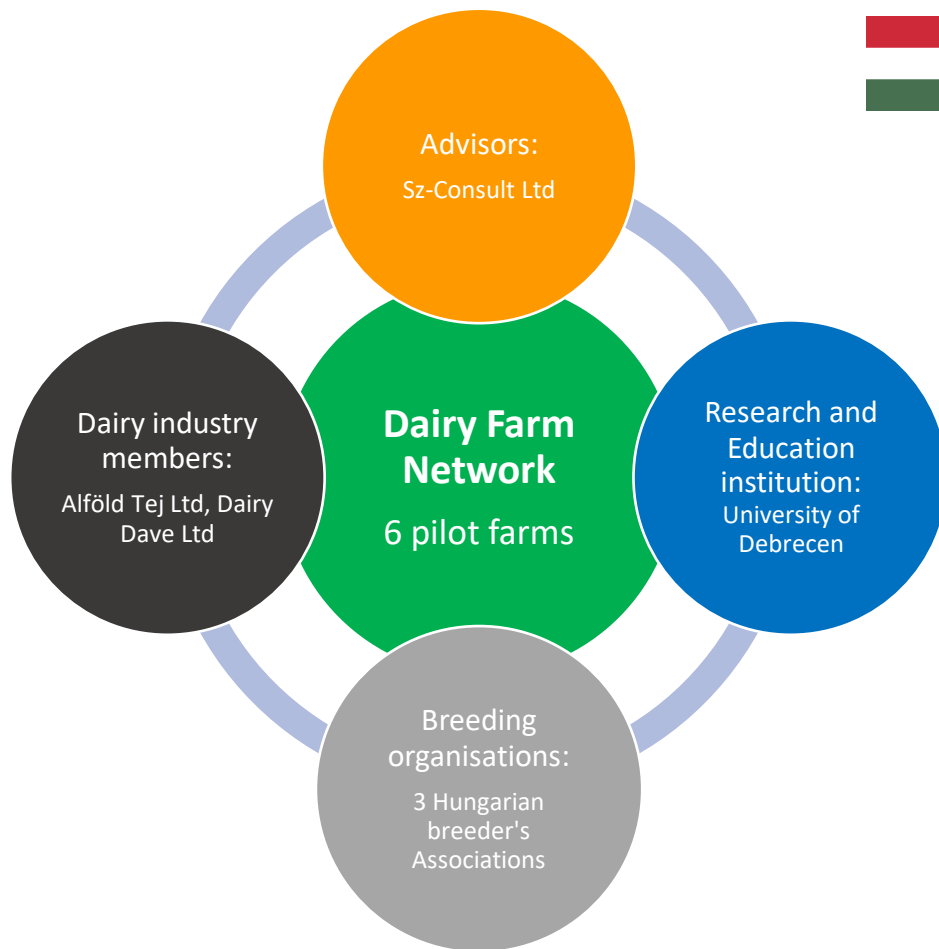


Figure 20. The regional dairy AKIS of Hungary consists of 6 pilot farms and 7 non-farmer institutions each with their own expertise.

Below, each member will be described into more detail.

## Pilot farms

The 6 pilot farms are spread over east part of Hungary, which is the largest milk producing region.

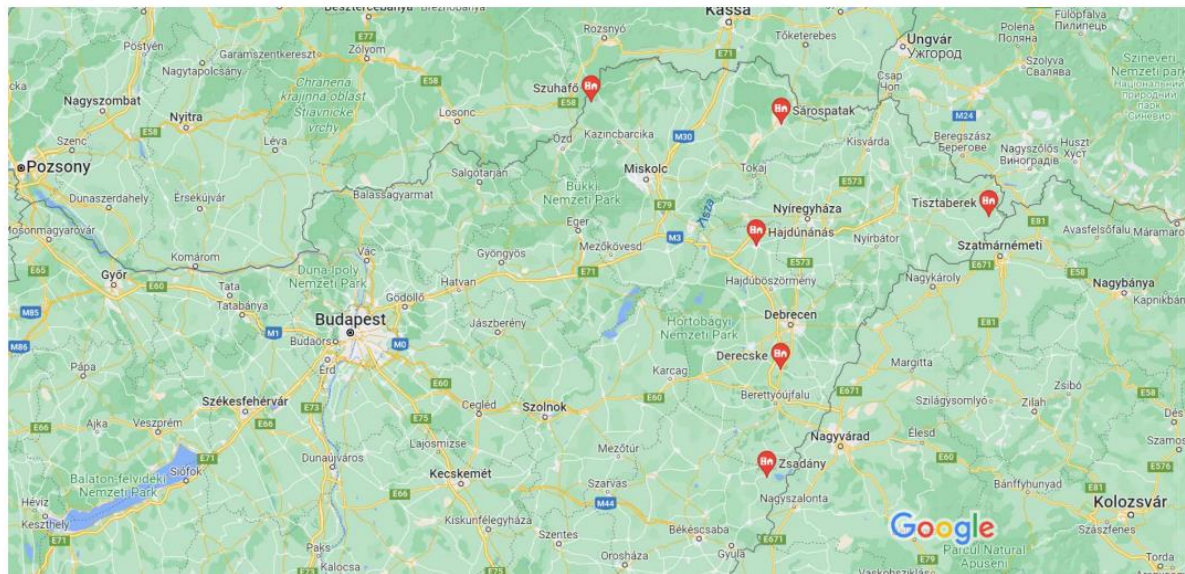


Figure 21. Location of the 6 pilot farms in Hungary.

### 1. Zsadányi Malom 95 Ltd

- Volume of milk production:  
8.000.000 litres/year
- Dairy cows:  
660
- Reason to include this farm:  
Zsadányi Malom 95 Ltd is a medium size company with its 660 dairy cows in the Great Plain of Hungary. Forage is produced by themselves as concentrate (corn, wheat) and roughage such as lucerne and corn silage for their cows. The milk yield of cows is over 10 000 litres, and the profitability is strengthened by state of the art biotechnology tools such as embryo transfer. The reason to include this farm: the motivation of implementing new technologies.

### 2. Geo Milk Ltd

- Volume of milk production:  
15.000.000 litres per year
- Dairy cows:  
1.150
- Reason to include this farm:  
Geo Milk Ltd is producing milk with a stock of more than a thousand dairy cows in Sárospatak, Zemplén region of north Hungary. Housing and feeding are intensive with high milk yield, such as over 11 000 litres per lactation. The approximately 3500 hectares of land is consisted of 2500 hectares cropland (cereals, rapeseed and sunflower) and 1000 hectares grassland. The breeding programme of this Holstein-friesian stock is excellent. The company owns no other species or breed. The profit depends on the milk price and efficiency of its production.

The reason to include is the sensitivity of the company due to the only source of income is the Holstein breed.

3. Kocsis family farm

- Volume of milk production:  
300.000 litres per year
- Dairy cows:  
60
- Reason to include this farm:

István Kocsis's dairy cattle farm is situated in the north part of Hungary, in a small village called Szuhafő. There are 60 dairy cows at this family farm and beef cattle. The owner is producing on 700 hectares of land, 200 ha of it is grassland and 500 ha cropland. Beside selling milk there is income from tourism, hunting and they produce different dairy products and sell to the local community. He has established robot milking system and automated feeding at his modern farm. The reason to include: the versatile source of income and the small-scale farming, and farming in a mountain region, and close connection to the local community.

4. Nyakas Farm

- Volume of milk production:  
23.000.000 litres per year
- Dairy cows:  
1.700
- Reason to include this farm:

It is a family-owned farm with 1700 Holstein cows that means the main activity and majority of income. There are sheep and beef cattle as well. The intensification of production is high, lactation yield reaches 11 000 litres milk per cow. The agricultural land is 1800 hectares, where more than 1000 hectares used as grassland, lucerne and silage. The reason to include: The comparatively large farm size, with possible problems that can occur in a large farm.

5. Kasz-Farm Ltd

- Volume of milk production:  
8.000.000 litres per year
- Dairy cows:  
700
- Reason to include this farm:

The company is situated in Derecske, east part of the Hungarian Great Plain, a typical agricultural region. Their 700 dairy cows produce 8 million litres of milk in a year. The feed is produced on 600 hectares of land, that is 400 ha feed crop, 100 ha grassland and 100 ha sunflower. The reason to include the farm is open for innovation, new technologies and owns excellent genetics.

6. Berek-Farm Ltd

- Volume of milk production:  
12.000.000 litres per year
- Dairy cows:  
900

- Reason to include this farm:  
 Nine hundred Holstein cows with excellent genetic background and modern housing and feeding technological applications can produce approximately 13 000 litres milk per cow during a lactation. That is excellent and one of the top yields in Hungary. There are no other species, breed, or activity for income at the company. 750 hectares of land is for feed production: 350 ha for corn silage, 150 ha grass and 250 ha lucerne. Cows are housed in free stall barns, aquabound in boxes, feeding robot and parallel milking parlour. The reason to include Top producing lactation milk in Hungary, with only income of the dairy cattle.

## Non-farmer stakeholders

### Education and Research

#### 1. University of Debrecen

Represented by: Levente Czeglédi, István Komlósi, Béla Béri, Krisztián Kovács, János Felföldi  
 The **Faculty of Agriculture and Food Sciences, and Environmental Management** is ranked between the top 250 universities with agricultural profile (QS world university rankings, 2018), and while it is preserving its leading position in Hungarian higher education, by 2020 and together with the other faculties is meant to bring a substantial contribution in order that the University of Debrecen become a top priority research university integrating education, research, health care and agricultural activities, appearing in the upper half of thematic and institutional international rankings. The University of Debrecen offers the widest scale of Ph.D. programmes in the country. Our 25 doctoral schools cover natural sciences, arts, agricultural, medical, and engineering and social sciences, awarding PhD degrees to approximately 150 students every year. Research groups operate with academic staff, researchers, students and entrepreneur communities within and also outside the University of Debrecen. Research at the UD makes a real difference to individuals, organisations and society. Researchers and university teachers at the Department of Animal Science are focusing on research, education, advisory services on livestock species and fish production with strong collaboration with farmers, breeders' associations and livestock industry.

### Breeding Associations

#### 1. Hungarian Holstein Breeder's Association

Represented by: László Bognár executive director  
 Holstein-Frisian cattle breeders decided to continuously improve the genetic capabilities of purebred red and black-breed Holstein-Frisian cattle bred in Hungary, to enforce uniform breeding principles, to create uniform advocacy, to further breed purebred herds, to implement the crossbreeding programme with this breed. Today, the members number more than 900, and the number of cows exceeds 248 thousand. Every year, the Association launch 65-90 young bulls in juvenile testing, including more and more in the framework of international exchange programs. The activities of the Association includes implementation of a balanced breeding programme, application of Holstein global index, functional trait evaluation, issuing proofs of origin and pedigrees, organisation of animal exhibitions, trainings, farm visits, auctions, issuing Holstein Magazine, etc.

## 2. Hungarian Simmental Breeder's Association

The breeding organization, genetic development and international representation of Hungarian Simmental is carried out by the Association, with 1300 members who own 28,500 cows. The breed is a dual purpose with balanced milk production, ecologically stable cow populations with excellent resistance and long useful life are the limits of competitiveness, The bulls are evaluated for milk and meat production, and also for all important fitness traits. The strength of the breed is manifested not only in concentrated milk production and good organizational strength, but also in excellent slaughter value and modern meat quality (marbled, powdered). In this regard, The Hungarian Simmental competes with large breeds of meat cattle, therefore it is also a competitive alternative in the field of suckler cow farming for meat use. The national average milk production of the breed is 7100-liter lactation milk with 3.96 % fat.

## 3. Hungarian Jersey, Guernsey, Ayrshire and Brown Swiss Breeder's Association

The Breeders Association is responsible for the improvement of the genetics and the Hungarian populations of breeds producing milk with high nutritional value. The Association aims the efficient production of milk fat and protein. Majority of the farmers are operating family farms with relatively low number of cows and some of them are producing dairy products.

### **Dairy industrial members**

#### 1. DAIRY-DAVE Ltd.

Dairy-Dave Ltd. has been engaged in the production and distribution of milking and refrigeration equipment, stable and maintenance technology machines and equipment since 1992. The domestic producers are supplied with technologies such as Fullwood milking technology, Boreco stable techniques, Packo Inox milk cooling equipment those represents the world class. Recent developments in milking technology resulted in creating conditions that are closest to the natural needs of animals, thereby optimising production. Equipment from outstanding manufacturers implements a state-of-the-art technology, from which the company prepares and implements a technological plan that meets the needs of the customer and the characteristics of the site. In their work, the principles of precision livestock farming are applied to a special priority, and environmental aspects are also extremely important.

#### 2. Alföldi Tej Kft. (Great Plain Milking Ltd)

Alföldi Tej Kft. is one of the largest dairies purchasing and dairy processing plants in the country. Since 2005, it has played a decisive role among domestic dairy companies. It was then that the company bought the bankrupt Italian Parmalat plant in Székesfehérvár. Nearly 100 dairy businesses, mostly in the Great Plains, are the current owners, and processed milk is largely from these companies. It processes 25% of the milk produced in Hungary, making it the second largest dairy processor behind Sole-Mizo Zrt. The volume of their production is also shown by the fact that according to the company registration data, the company generated a turnover of more than HUF 55 billion in 2020. At their sites in Székesfehérvár and Debrecen, they produce a wide range of dairy products in above-average quality.

## **Consultation and service**

### **1. Sz-Consult Ltd.**

The main profile of the company is the genetic counseling of dairy cattle farms that includes herd management, conformation judgement, mating plans, elaboration of a heifer breeding and culling plan, embryo transfer. Currently, 30.000 cows and their progenies managed on 50 farms.

## Facilitation methods

### **What have we done?**

The main topics of our project were in focus during our meeting and also at farm visits, such as: 1) socio-economic resilience, 2) technical resilience and 3) environment, animal welfare and society.

First, we (University of Debrecen) give a short speech on resilience and it was followed by participant's opinion. It revealed how they think on the future and they also got a bunch of information on the perspective of small scale farms and industrialized dairy sector as well.

### **What was easy?**

The animal breeders, breeding organisations, and all the participants of national dairy AKIS were interested in the project especially the discussions in person. They are open talk about their problems and discuss the possibilities and the future.

### **What was difficult?**

During the discussion about resilience the topic become wider and wider and shifted to several directions, thus the main challenge was to keep the aim in focus.