

# Protection and development of Hungarian animal breeding traditions at **HáGK**



**Szalay István and** colleagues

HáGK, Gödöllő, Hungary

# Europe

## The Carpathian basin



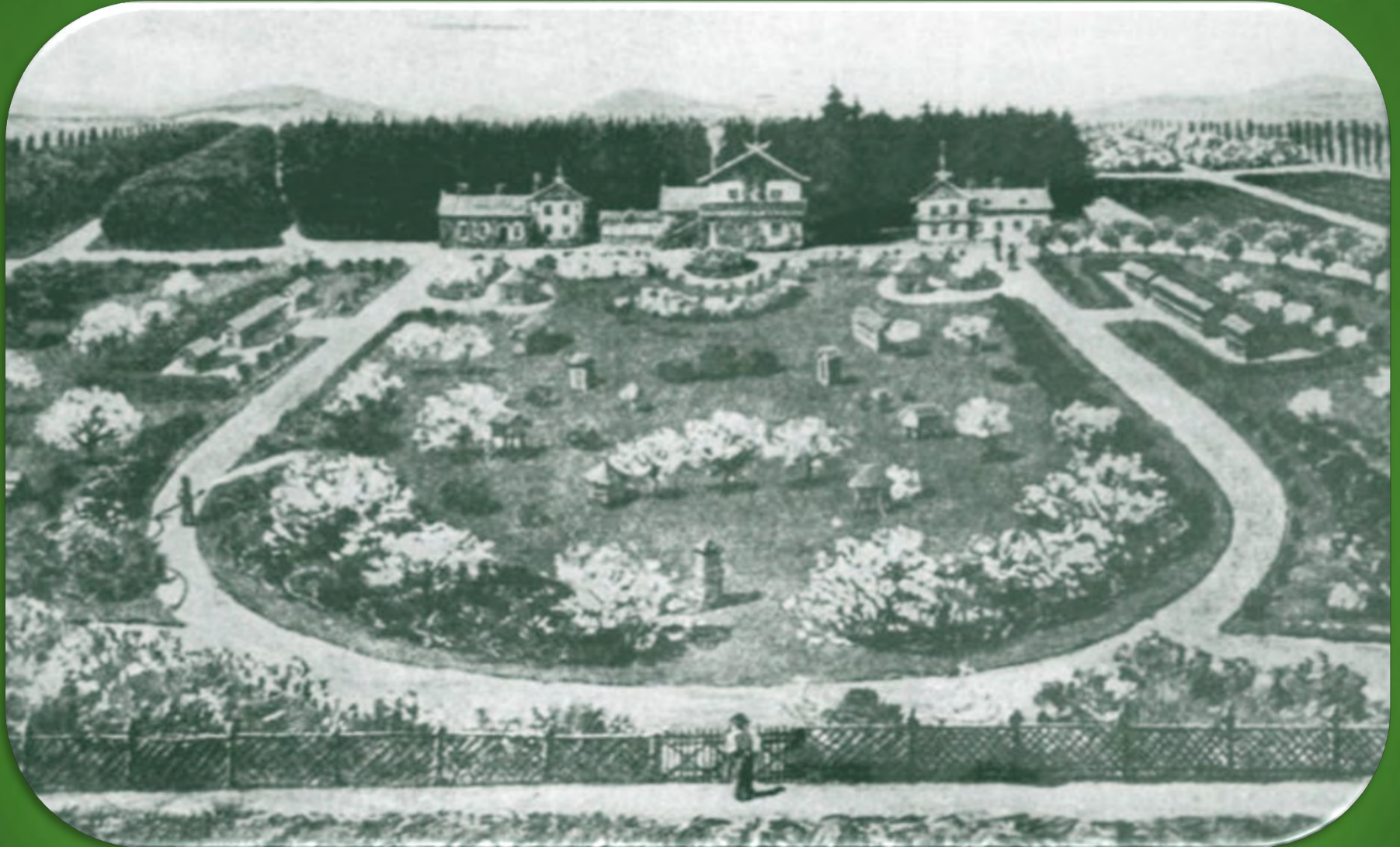
# Brief History of Gödöllő Institutions for Animal Breeding and Research



# Hungarian Royal Poultry Breeding Farm (established in 1897)



# Hungarian Royal Apiculture Centre (established in 1899)



# INSTITUTIONS FOR ANIMAL BREEDING AND RESEARCH IN GÖDÖLLŐ

1950 *Research Institute for Animal Breeding*

1952 *Research Institute for Small Animal Breeding*

1980 *Research Centre for Animal Breeding and Nutrition*

1992 *Institute for Small Animal Research (KÁTKI)*

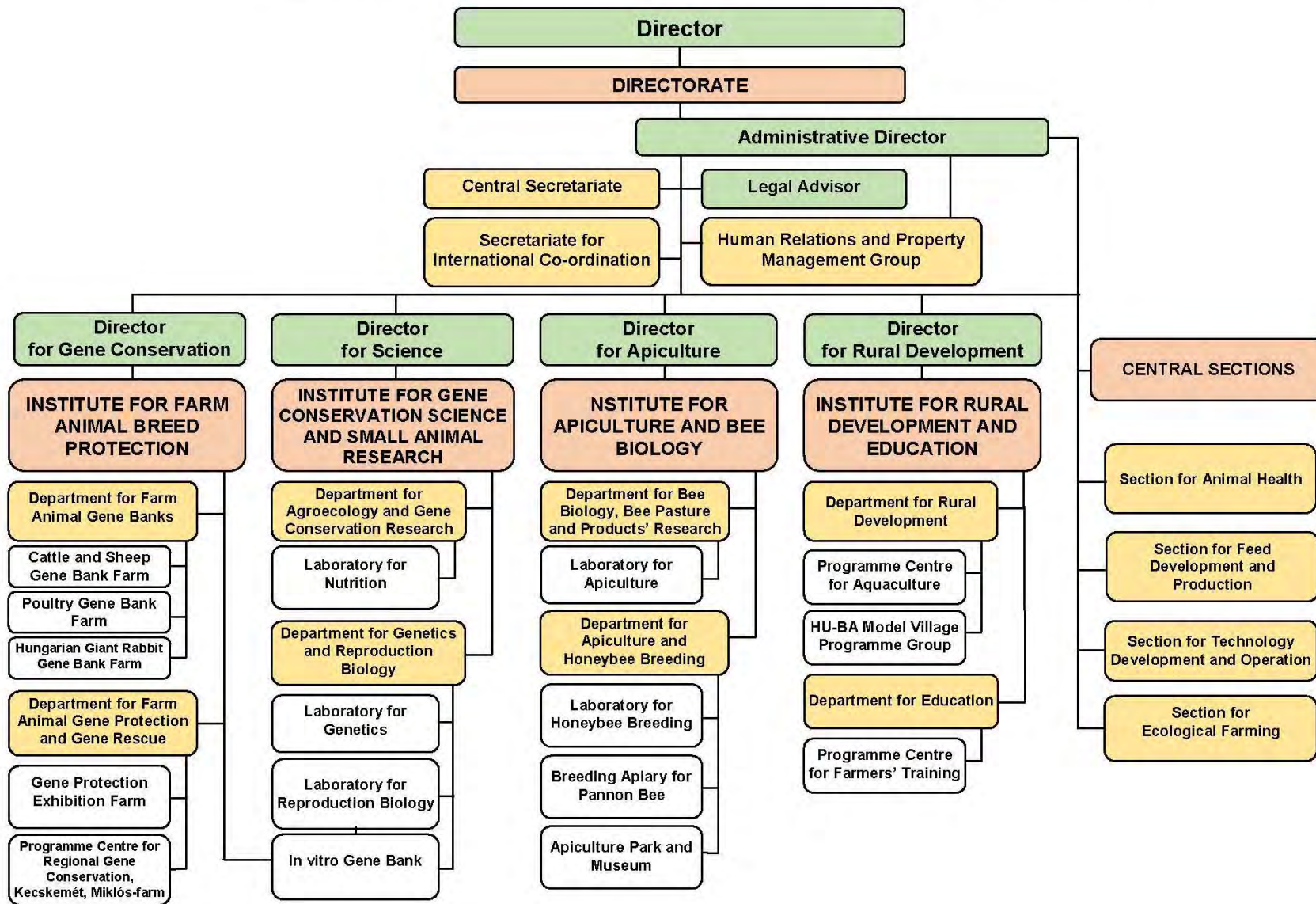
2006 *Research Institute for Animal Breeding and Nutrition (ÁTK)*

2010 *Institute for Small Animal Research and Co-ordination Centre for Gene Conservation (KÁTKI)*

2013 *Research Centre for farm Animal Gene Conservation (HáGK)*



# ORGANISATIONAL STRUCTURE OF THE RESEARCH CENTRE FOR FARM ANIMAL GENE CONSERVATION (HáGK)



# HáGK Institutes and their main activities





# Institute for Farm Animal Breed Protection

- Conservation of farm animal and native dog breeds, gene protection and gene rescue programmes
- Developing gene conservation methods
- Collecting and maintaining in vivo gene banks of traditional Hungarian farm animals



# Institute for Gene Conservation Science and Small Animal Research

- Basic research in molecular genetics and reproduction biology
- Research, development and innovation in small animal breeding, gene conservation and organic farming
- Collecting and maintaining in vitro gene banks
- International co-operations in research and development



# Institute for Apiculture and Bee Biology

- Gene conservation and breeding of Pannon bee
- Qualification and production studies of honey and bee products
- Apicultural, bee-biology and bee-health research, development and innovation
- Education and technical training in apiculture and bee-biology



# Institute for Rural Development and Education

- Elaboration, co-ordination and implementation of rural development and village programmes, related to breeding and use of local, indigenous breeds
- Preparation, edition and dissemination of information materials for rural programmes
- Education and training in rural development and the use of local, indigenous breeds



# Proposals for co-operation with institutions abroad

- PhD courses and technical training
- In vivo and in vitro gene conservation of local breeds
- Animal breeding and conservation research, co-operations in development, adaptation studies
- Co-operation in apiculture and aquaculture
- Trilateral co-operations in Europe and in Asia
- Organisation of professional co-operations with other Hungarian institutions



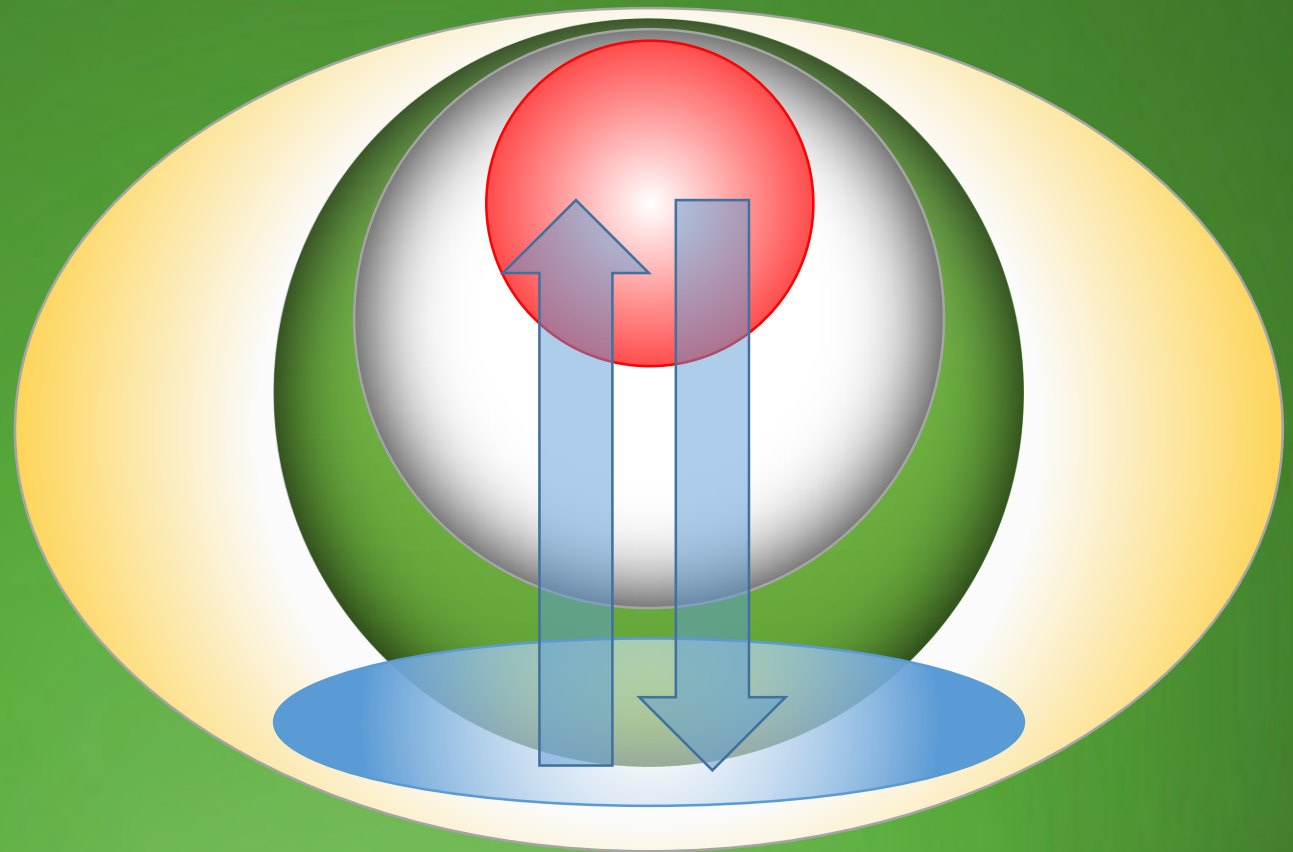
# Protection System of Farm Animal Genetic Resources

## Gene bank

Gene  
protection

Gene  
conservation

Gene rescue-  
Breed rescue



# Traditional Hungarian Farm Animal Breeds Conserved by **HáGK**: small animal breeds



# Traditional Hungarian Farm Animal Breeds Conserved by **HáGK**: local livestock breeds





# Traditional Hungarian Farm Animal Breeds

Conserved by **HáGK**: local dog breeds



# Traditional Hungarian Farm Animal Breeds

Conserved by **HáGK**: local farmed fish species



# Farm park and gene rescue of traditional Hungarian farm animal breeds in HóGK



# Farm animal gene rescue programme in the Carpathian Basin: The Gene Ring

## A GÉNGYŰRŰ



**Szalay István and colleagues**

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# In situ gene rescue in the Carpathian-basin



A Géngyűrű

The Gene Ring

# The GENE RING programme

## Carpathian Mountain cattle



# The GENE RING programme

## At animal market



# The GENE RING programme

## Carpathian Mountain cattle





# The GENE RING programme

## Carpathian spotted type cattle



# The GENE RING programme

## Carpathian spotted type cattle



# The GENE RING programme

## Carpathian sheep breeds



Gyimes racka



# The GENE RING programme

## Carpathian sheep breeds



# The GENE RING programme

## Carpathian sheep breeds



# The GENE RING programme Transylvanian goat



# The GENE RING programme

## Transylvanian goat



# The GENE RING programme

## Poultry gene rescue



Transylvanian  
spotted turkey



Banat goose



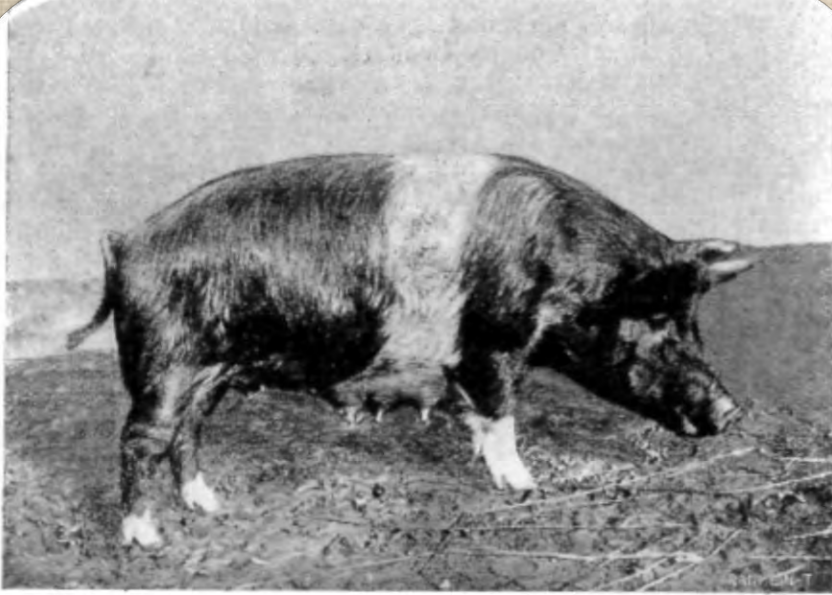
# The GENE RING programme

## Further plans: The Sekler horse



# The GENE RING programme

## Further plans



39. ábra. A szászok sertése (a báznai) Nagyküküllő megyéből.  
sertés Magyarországon\* című munkám számára készült és a Franklin-társulat által átengedett eredet felvétel után.

Bazna pig



Transylvanian  
buffalo

# The GENE RING programme

## Traditional farmstead in the mountains



# Farm animal gene rescue: In vivo gene bank stocks at **HáGK**





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Login

Conservation, research and development of our national values implied in our traditional farm animals are the hereditary rights and obligations of ours

INTRODUCTION

MAIN UNITS

PROFESSIONAL STAFF

OLD HUNGARIAN FARM  
ANIMAL BREEDS

PROJECTS

PUBLICATIONS



CONTACT

EVENTS

NEWS

PHOTO GALLERY



News

In vitro Gene Bank of Hungarian indigenous

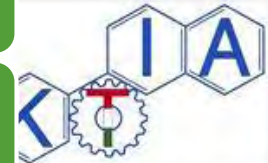
[www.genmegorzes.hu](http://www.genmegorzes.hu)

[www.geneconservation.hu](http://www.geneconservation.hu)

Major projects



[www.katki.hu/cryobird](http://www.katki.hu/cryobird)



[www.geneconservation.hu/kti](http://www.geneconservation.hu/kti)

a

SUPERVISING AUTHORITY



WEBSITE OF  
HUNGARIAN  
GOVERNMENT

Ministry of Agriculture



The electronic version of the Hungarian Simmental memory game on native Hungarian domestic animal breeds has been completed. It can be downloaded for free.

Read more

PROFESSIONAL PARTNERS



Thank you for your kind attention  
and hope to see you at HáGK soon

