

Animal Gene Banks in Turkey

CROATIA- May 2012

Muharrem SATILMIŞ
Veterinarian
Livestock Central Research Institute



ESTABLISHMENT OF GENE BANKS

- Two gene banks established with TURKHAYGEN-I
- Project duration 5 years, 2007-2012
- 5 cattle, 15 sheep, 5 goat and 5 horse breeds were taken to cryo-preservation.
- Project budget ~ 4 m Euro



ACHIEVEMENTS UNTIL TODAY

	Semen	Embryo	DNA	Somatic Cell
Cattle (5 Breeds)	+	3 breeds + 2 breeds -	+	+
Sheep (15 Breeds)	+	+	+	+
Goat (5 Breeds)	+	+	+	+
Horse (5 Breeds)	-	-	+	+



OBJECTIVES OF NATIONAL CRYO PROGRAMME-1

Collection Goals:

- Long-term conservation of endangered breeds
- Enhance research capacity, including researchers
- After completion of the project enrich gene banks with both material numbers in each breed and other breeds



OBJECTIVES OF NATIONAL CRYO PROGRAMME-2

Collection Categories:

- Species

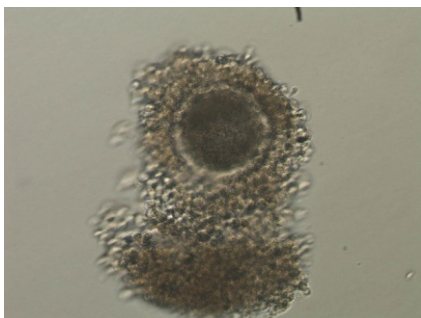
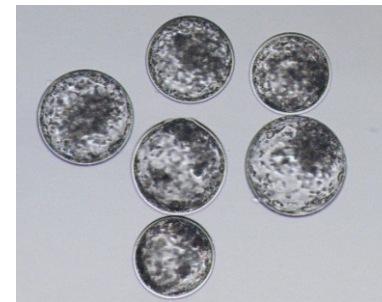
Cattle, sheep, goat, water buffalo, chicken and horse. If possible duck, goose, ass, cat and dog.

- Material

Embryo, semen, DNA, somatic cell. If possible ovum.

- Other disciplines

Fisheries and microbial genetic resources (planning stage)



PARTICIPATION OF STAKEHOLDERS

- Ministry of Food, Agriculture and Livestock
National Focal Point- General Directorate of Agricultural
Research and Policy
Research institute and stations
Provincial administration units
- Turkish Scientific Research Council
- Universities



RESPONSIBILITY

- Ministry of Food, Agriculture and Livestock has the main operational responsibility of gene banks
- Funding is covered by government
- National legislation has been prepared



DESICION MAKING PROCESS

Type of material

- Somatic cell is the most convenient material to collect
- Especially we faced difficulties with local cattle breeds for embryo recovery

Collection targets

- Researchers specialized for breeds finds eligible animals in different populations around the country
- Different herds in various locations are preferable



STORAGE AND DOCUMENTATION

- Necessary infrastructure for cryo-conservation was established in Lalahan Central Research Institute and TUBITAK-MAM (liquid nitrogen tank, deepfreeze, power supply etc.)
- Data bank was established and available at the web site www.turkhaygen.gov.tr
- There is no specific security for gene banks accept for general precautions of buildings



SANITARY ARRANGEMENTS

- Identified with relevant legislations animals should be disease-free for several diseases (IBR, BVD, leptospirosis, tuberculosis, brucellosis, blue tongue etc.)
- Routine sanitary precautions and preventative vaccines



LEGAL ISSUES-1

Conservation, using and transboundary access of AnGR and sustainable management are regulated with the current legislation and the decision of Animal Genetic Resources Conservation NCC.

Legal framework for *ex situ* conservation at national level is determined with the TURKHAYGEN-I project agreement.



LEGAL ISSUES-2

There is a draft regulation on procedures and principals of national and transboundary usage of domestic animal genetic resources .

The regulation outlines the legal frame of using and exporting of live and gene banks' AnGR materials.





EFE, first clone of Turkey

THANK YOU

