A Real-Time Case Study from FMD Outbreak in Cyprus

From Crisis to Capacity

Building *ex situ* Conservation After an Outbreak

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Cyprus *ex situ* | ERFP Regional Working Group

ERFP

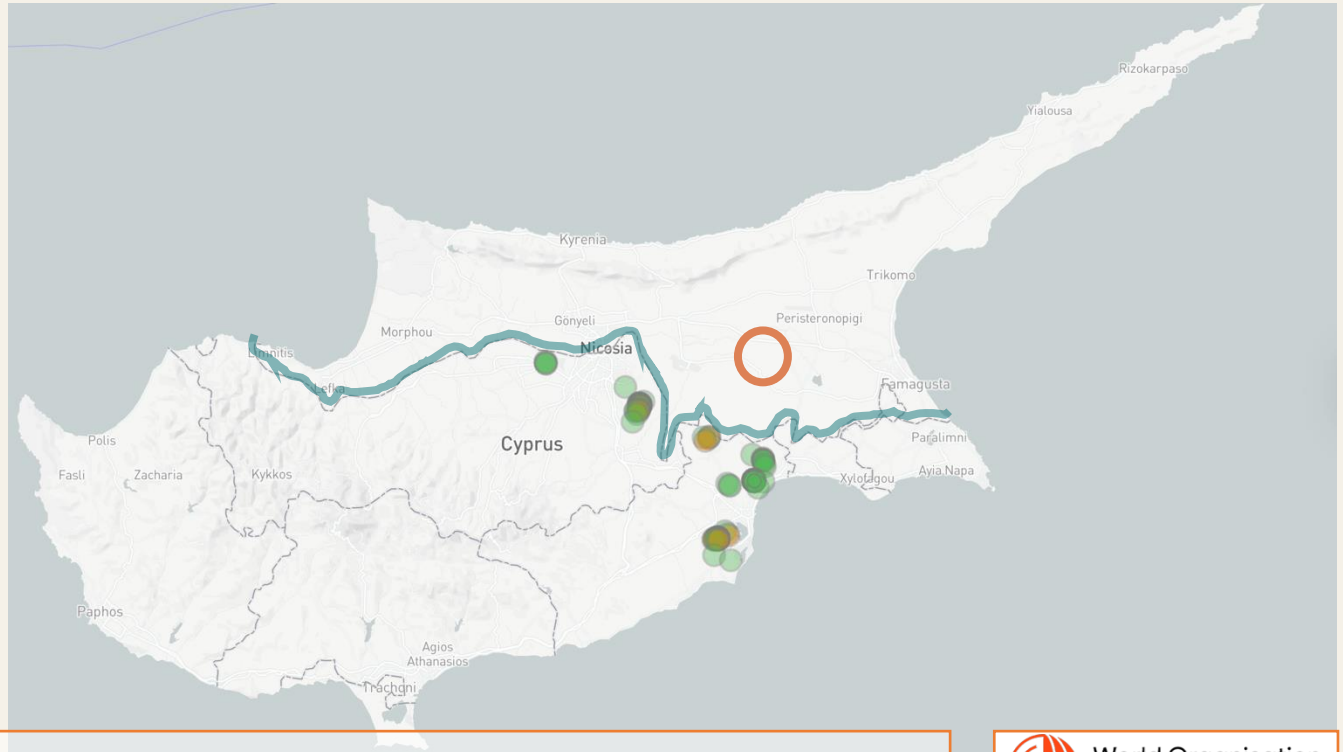
FMD in Cyprus: Current Status

Timeline & Scope

December 2025
First cases in the north of Cyprus

February 20, 2026
First confirmed near Larnaca

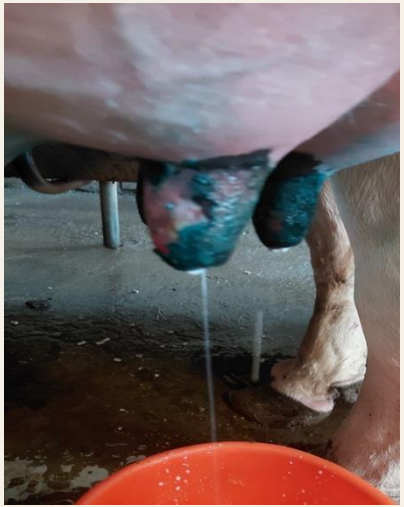
May 2026 (Today)
Outbreak still active



"FMD-free country where vaccination is not practiced"

World Organisation for Animal Health

Foot and Mouth Disease



Background

Highly Contagious Virus
Vesicular Disease

Affects cloven-hoofed animals
Sheep, goat, cow, deer, pigs …

Economic Losses
Production, animal death, trade constraints

Immediate Stamping out
Under European Commission regulations

The National Livestock: Scale and Exposure

~500,000	~85,000	~400,000
Small Ruminants	Dairy Cattle	Swine

- 116 farms affected
- 67,229 euthanized animals
- Vaccination:

90% of cattle, 65% small ruminants, 40% swine

Endangered Adapted AnGR

Damascus Goat

Chios Sheep

Wild and Indigenous AnGR at risk

Irreplaceable AnGR

- Rare breeds:
  - Stamping out exceptions?
- Wildlife:
  - Vaccination?
  - Border risk

<10,000
Fat-tail Sheep
Unique genetic trait

1,300
Native Cattle
CRITICALLY ENDANGERED

~ 3,000
Cyprus Mouflon
Wild, endemic, protected

Gaps Exposed by the Outbreak

No national livestock genebank	Capacity gap
Limited genetic characterization (DNA/pedigree)	⚠ Minimal
No cryopreservation capacity	Capacity gap
No emergency AnGR protocol	Capacity gap
No Gene Bank legislation/authority	Capacity gap

Never Let a Good Crisis Go to Waste…..

- The outbreak made invisible gaps visible.
- Stakeholders now understand that genetic resources are part of national resilience.
- The discussion has started, but it needs a practical first step.

Where Do We Start? The Governance Question

- **National Advisory Committee and National Focal Point**
  Develop a National Plan of Action - Policy direction and priorities

  Ministry of Agriculture, Cyprus Institute, ARI, Veterinary Services, University, Breeders Assocs

- **Establishment of a Genebank – National cryobank (host)**

  Government (Veterinary Services, ARI), center for excellence

- **Legal Framework and Policy**

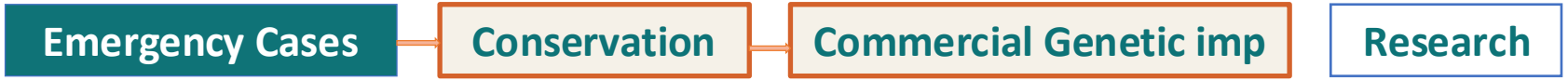
- **Funding Source**

ERFP Guidelines

A Foundational Ex Situ Preparedness Plan

Phase 0

- Establishing a foundational national ex situ conservation strategy
- Development of practical and scalable first-step actions
- Alignment with ERFP/EUGENA frameworks and expertise
- Long-term roadmap toward a national livestock genebank
- Short-term, mid-term, and long-term budget options



Possible Phases of a Path Forward?

Phase 1

Emergency Assessment

Now – 6 months

- Sample at-risk populations
- Basic pedigree work
- DNA banking
- Stakeholder mapping

Phase 2

Infrastructure Planning

6–12 months

- Decide genebank scope & location
- Identify equipment needs
- Secure funding
- Establish governance

Phase 3

Capacity Building

1–2 years

- Technical training
- Equipment acquisition
- Policy integration
- Sustainability planning

Drawing from your expertise

1. Guidance on genebank design from those who've built from scratch
2. How much genetic material is needed to reconstitute a breed or specie?
3. Advice on integrating *ex situ* with *in situ* conservation
4. Connection to funding mechanisms and grant opportunities
5. Mistakes to be avoided / pitfalls to avoid
6. How can we secure maintenance and continuity (economically and practically)?

Discussion Questions

- How much genetic material is needed to reconstitute a breed or species?
- What's the criteria for selection of a DNA "donor"?
  - Genetically, Disease, Quantity, Sample type (semen, embryos, hair, DNA, ovarian tissue, primordial germ cells, ovarian tissue, blood)
- What to include in the budget?
  - Analysis cost, Materials for collection and cryopreservation, Genebank facilities, Software, Maintenance
- How do we integrate with Eugena?


The best time to build a genebank is before a crisis…
The second-best time is now!!
Thank Ewe
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