European Regional Focal Point on Animal Genetic Resources 20.05.2026 – Sassari (Italy)

Bulgaria: Impact of disease eradication measures on endangered breeds

A case study on sheep pox and effectiveness of restrictive measures

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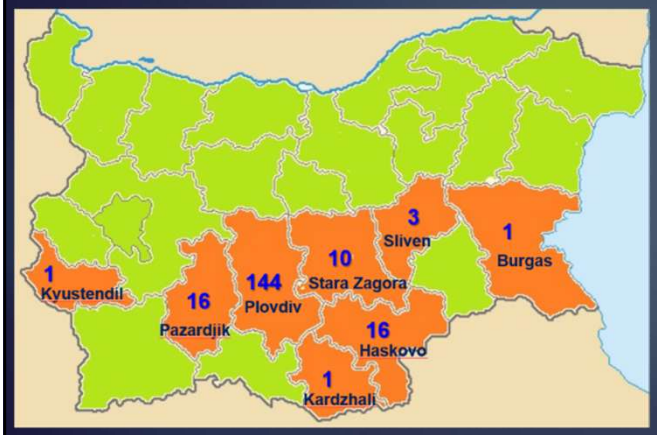
Epidemiological dynamics of SPPV outbreaks in Bulgaria (2024–2025)



Number of outbreaks by district

Sept–Dec 2024
12 outbreaks stamping out applied
outbreak wave temporarily controlled

May–Nov 2025
180 registered outbreaks
rapid geographic expansion
large-scale culling

The Plovdiv district became the epidemiological epicenter of the epidemic wave.

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Disease control versus conservation of endangered breeds

- ✓ Bulgaria has a rich cultural heritage of 18 native sheep breeds and 3 native goat breeds
- ✓ Some sheep breeds are critically endangered – fewer than 500 animals
- ✓ SPPV outbreaks create a conflict between: rapid eradication and long-term conservation
- ✓ Risk of irreversible genetic erosion

Direct losses in some endangered native breeds:

19 affected herds	4 affected herds	2 affected herds	3 affected herds
Patch-faced Maritza	White Maritza	Starozagorska	Dubenska
			
2 762 sheep culled	299 sheep culled	220 sheep culled	1216 sheep culled

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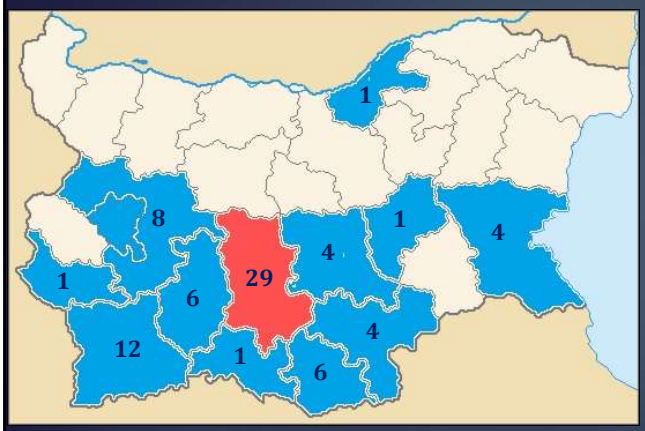
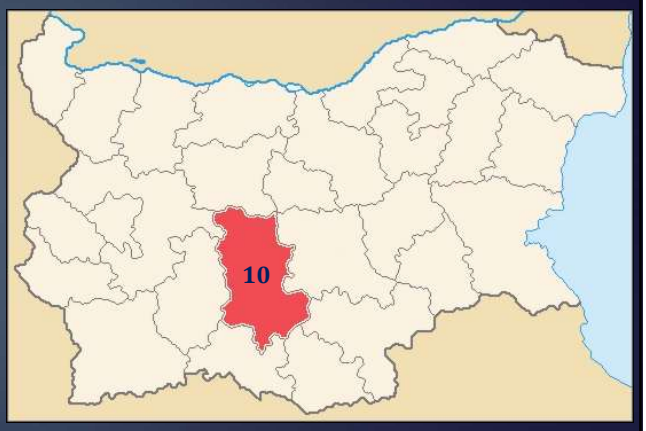
Geographic concentration of endangered Maritza breeds before the SPPV epidemic

Patch-faced Maritza



* Number of herds in different districts

White Maritza



* Number of herds in different districts

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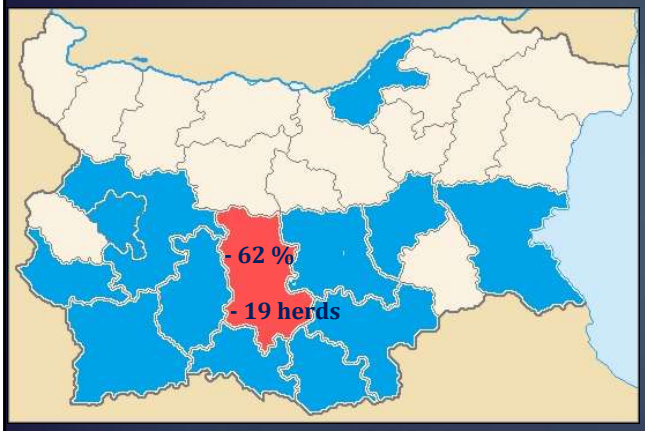
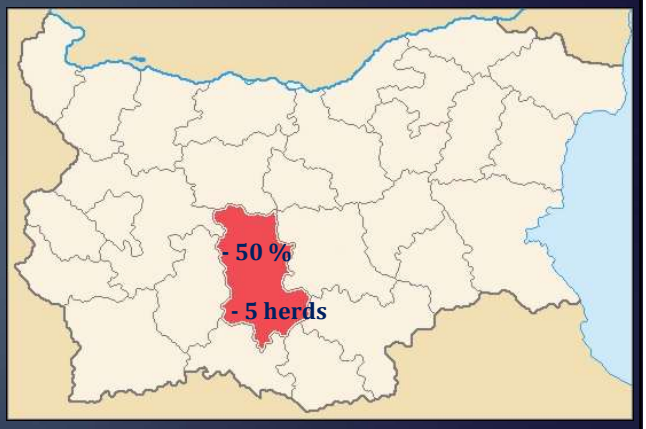
Population decline after the SPPV outbreak wave

Patch-faced Maritza



62% population decline in Plovdiv Dist. – 19 herds lost

White Maritza



50% total population decline – 5 herds lost

Although all biosecurity measures were complied with in the begining

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The Epidemiological outcome raises important questions:

Control strategy applied in Bulgaria included:

- stamping out
- movement restrictions
- restrictions on grazing
- milk collection limitations
- surveillance zones
- no emergency vaccination strategy implemented

Epidemiological outcome was

- 192 outbreaks
- spread across 7 districts
- 26 municipalities
- 83 settlements
- 23 305 were culled animals
- Severe social consequences

Restrictive measures alone were insufficient to prevent large-scale geographic spread of SPPV
The Plovdiv district is still blocked for movement and grazing of sheep and goat !

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Why Endangered Breeds Require a Different Approach?

- Current eradication protocols are not well adapted for endangered breeds
- Conservation status should be considered in emergency response
- Need for proportional and risk-based measures
- Veterinary policy should include genetic conservation objectives
- Disease eradication policy should not become a driver of genetic erosion

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Proposed emergency conservation strategy

- During outbreaks of Category A diseases, including sheep pox and peste des petits ruminants (PPR)
- Emergency vaccination of endangered breeds located in high-risk outbreak areas
- Protection of irreplaceable genetic resources
- Better integration of epidemiological control and genetic conservation
- Conservation status should be integrated into epidemiological risk assessment

This may require future discussion within the framework of the EU Animal Health Law and related delegated regulations (2016/429, 2020/687, 2023/361) concerning emergency measures and vaccination strategies applicable to endangered local breeds

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AnGRs under epidemiological pressure

- Small population sizes are very endangered
- Risk of irreversible loss of genetic diversity is high
- Loss of adaptive traits
- Loss of unique maternal lineages
- Increased extinction risk

AnGRs should not remain outside the epidemiological decision-making process
Delegated Regulations: 2020/687 and 2023/361 are not sufficient written !

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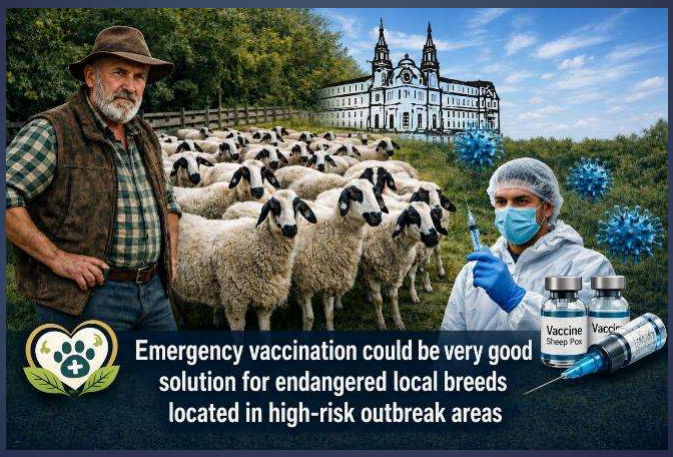
Emergency vaccination may reduce genetic erosion during epidemic outbreaks of SPPV.



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