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Sheep Pox Outbreaks in Bulgaria: Epidemiological Spread and Socioeconomic Impacts on the Sheep Farming Sector

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Aim and Objectives:

Aim:

To assess the epidemiological spread and socioeconomic impact of sheep pox (SPPV) in the Bulgarian sheep farming sector, with particular emphasis on the consequences of stamping-out for affected farmers.

Objectives:

- Characterize the epidemiological spread and scale of flock depopulation.
- Assess the economic, structural and psychosocial consequences for affected farmers, breeding activities and genetic resources.
- Evaluate farmers' assessment of the control measures implemented by the responsible institutions and farmers' attitudes towards vaccination against SPPV.

Materials and methods

Data on the distribution of sheep pox outbreaks were obtained from ADIS, WAHIS and the Bulgarian Food Safety Agency (BFSA) for the period from 4 September 2024 to 1 September 2026.

To assess the impact of stamping-out on affected farmers, a 20-question survey was conducted among 90 sheep farmers whose flocks were culled in 2025.

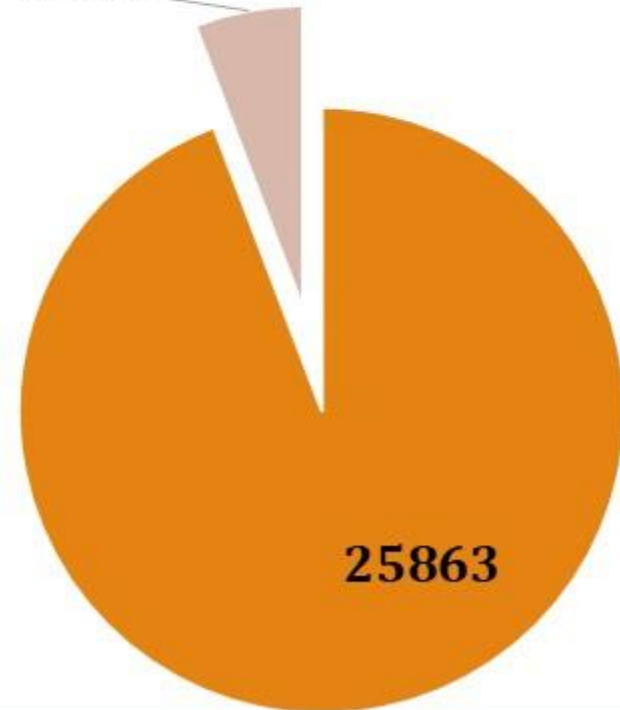
The economic consequences of stamping-out were assessed using farmer survey results and data from the Ministry of Agriculture and Food (MAF).

Distribution of sheep pox outbreaks in Bulgaria, 2024–2026



Culled small ruminants (27 456)

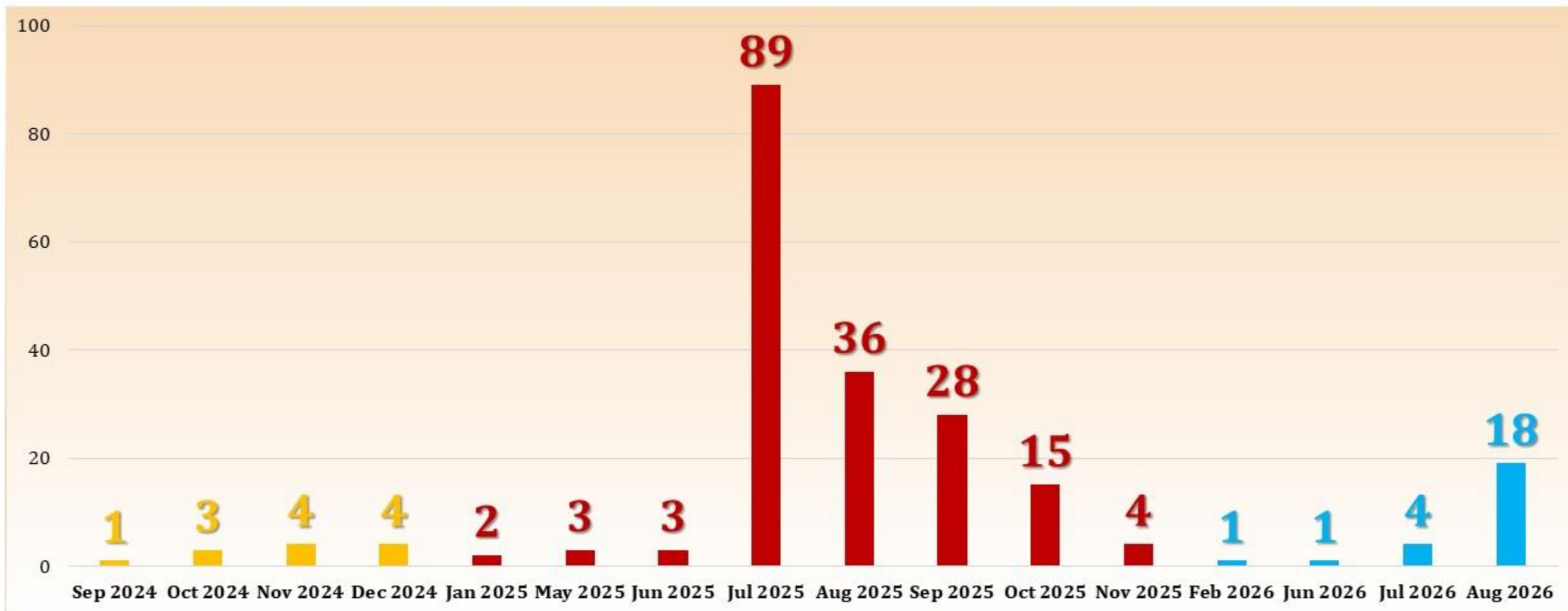
1593



Sheep Goats

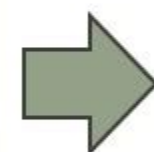
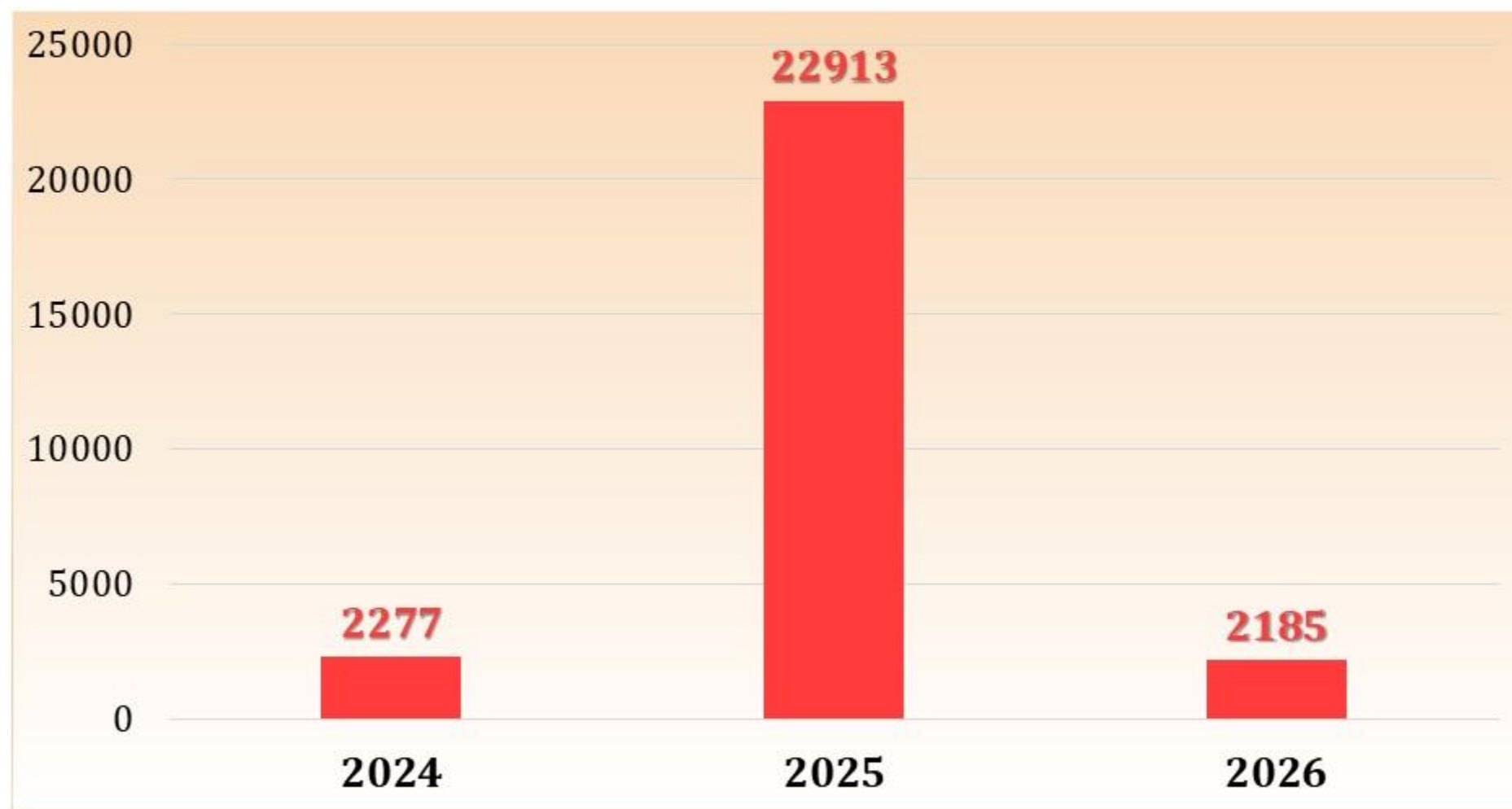


Monthly distribution of sheep pox outbreaks in Bulgaria, 2024–2026





Sheep and Goats Killed under the Stamping-Out Policy, 2024–2026



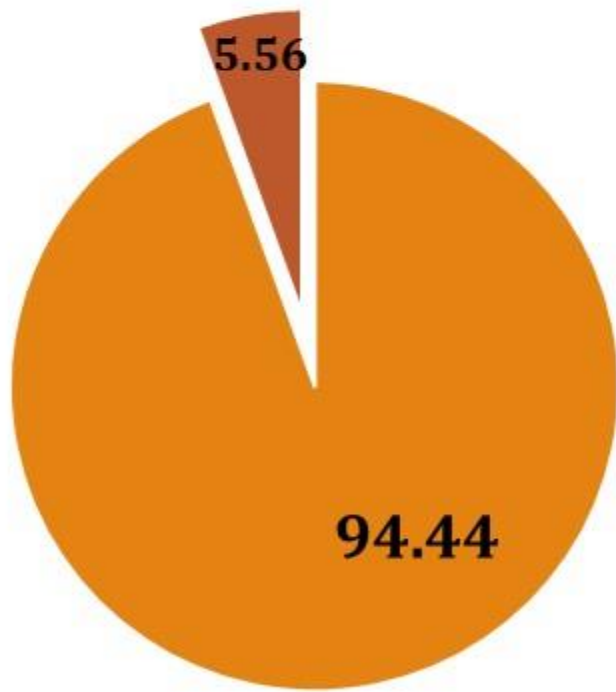
27 375

**Total sheep and
goats killed**

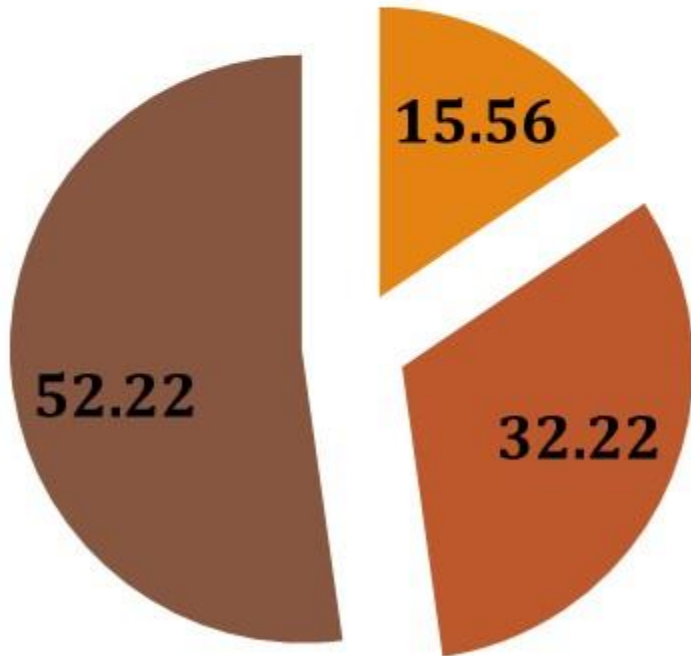


Compensation after stamping-out: farmers' assessment

Farmers receiving state compensation,
%

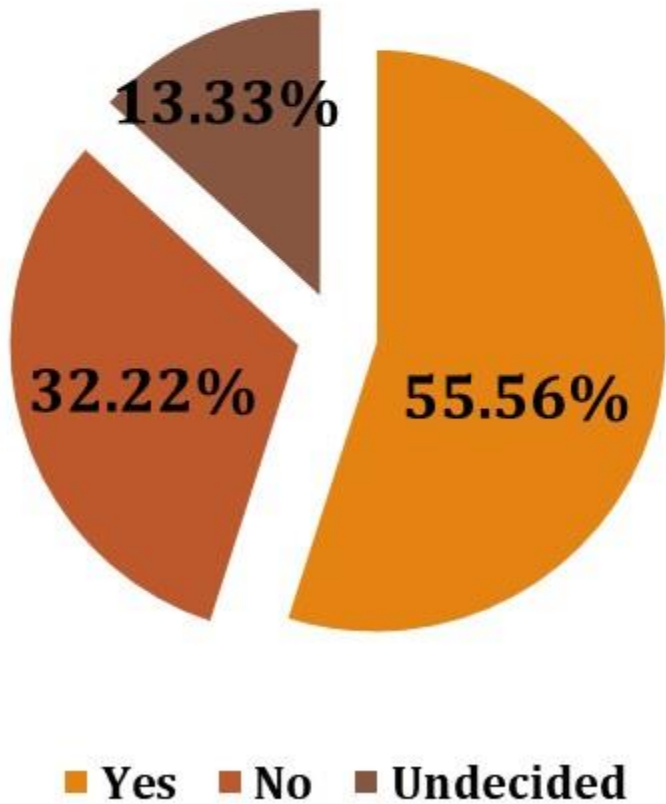
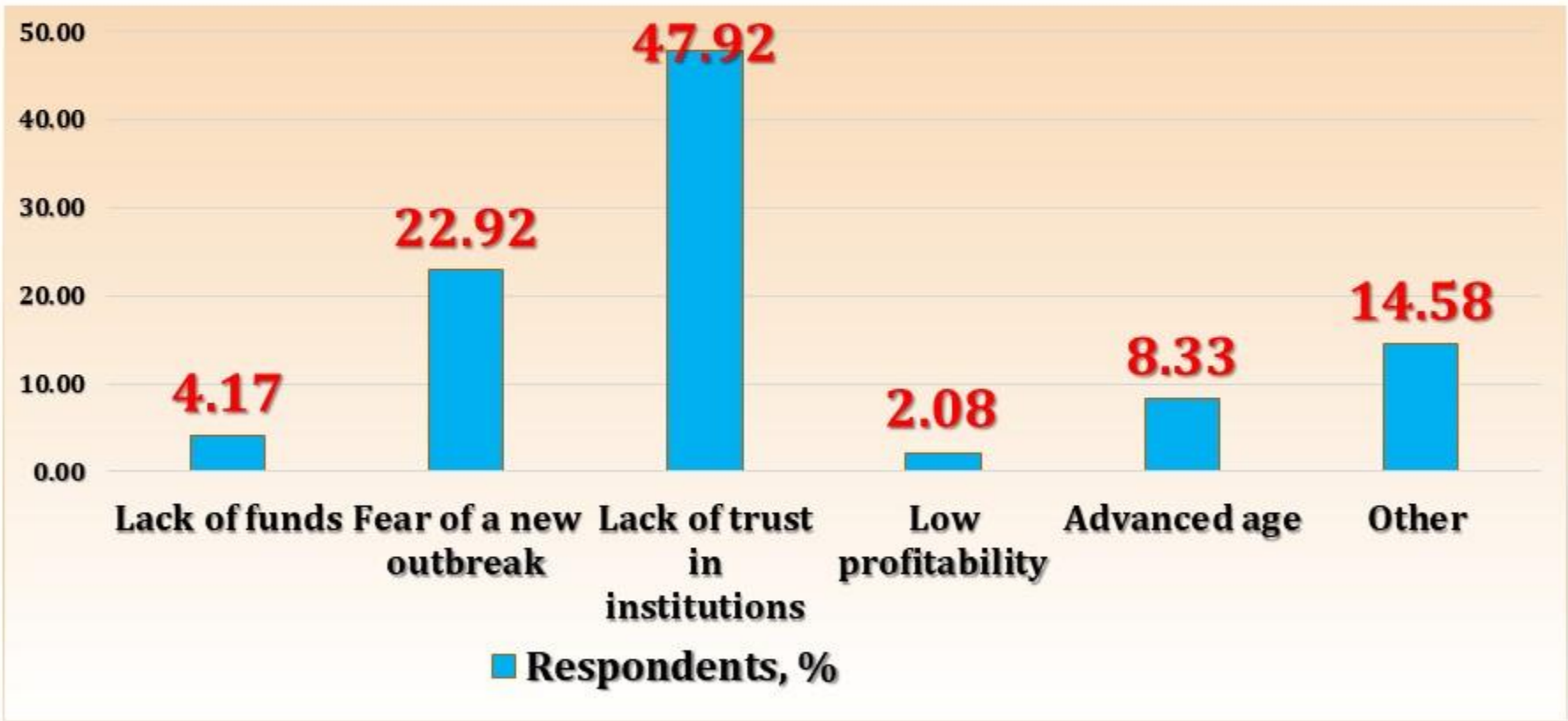


Farmers' assessment of losses
covered by compensation, %





Farmers' intention to continue farming and barriers to restocking



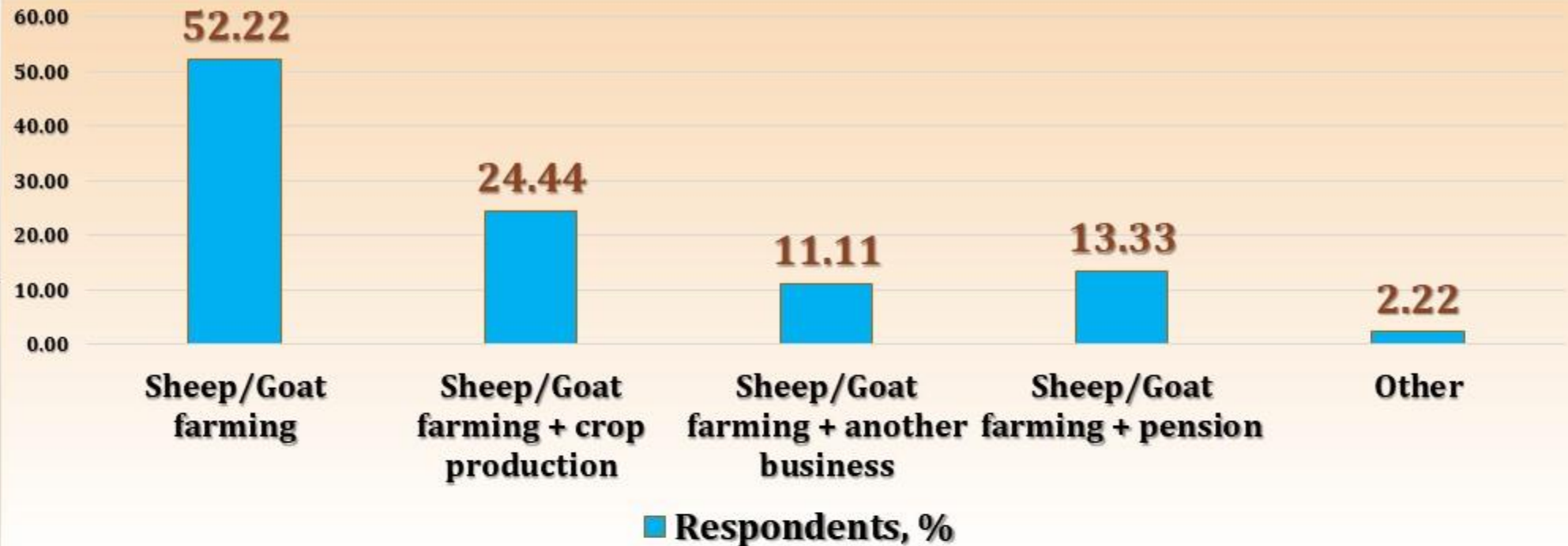


Farmers' Economic Activities Before and After Stamping-Out

Household income sources before stamping-out, %

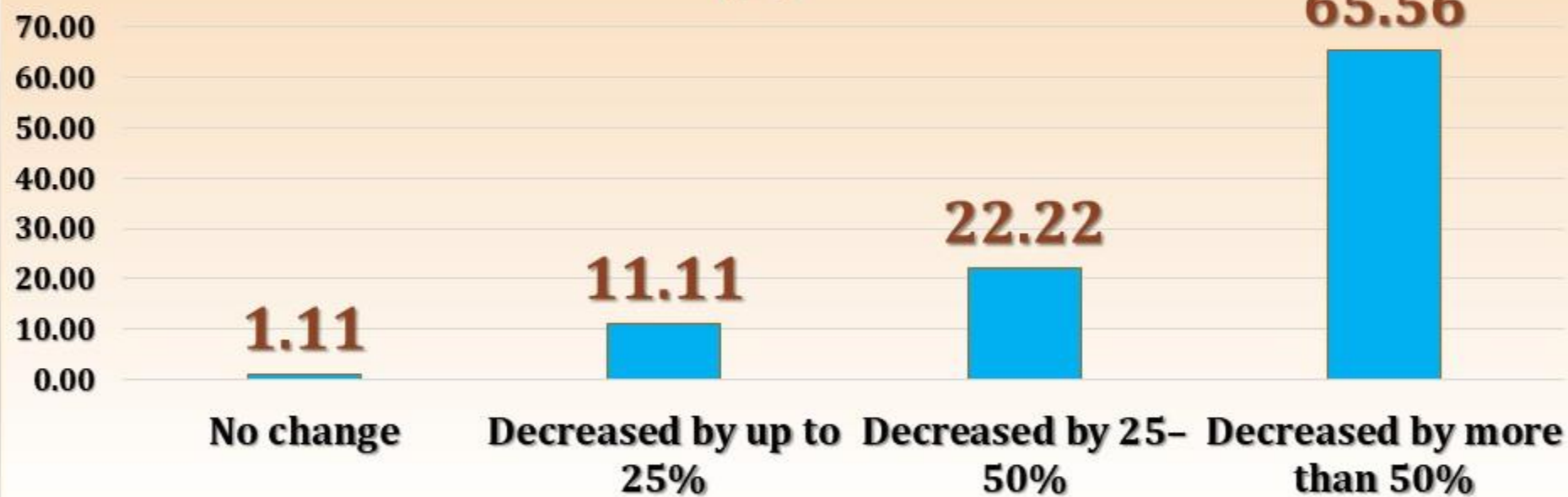
Multiple responses allowed

Farmers' current economic activity after stamping-out, %



Results and Discussion

**Decrease in farmers' income following flocks euthanasia,
(%)**



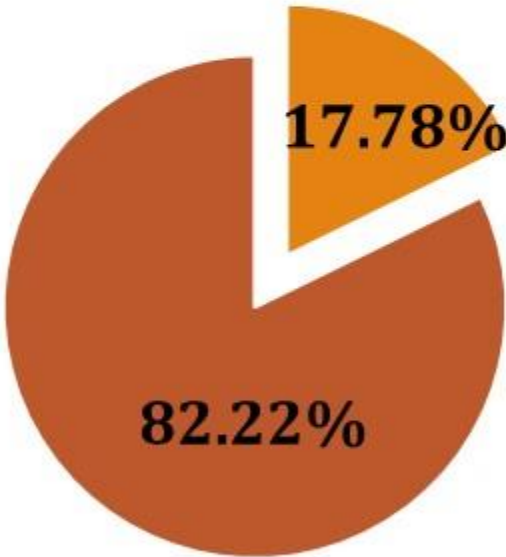
44.86 %

**Farmers who left the
sheep and goat
farming sector**



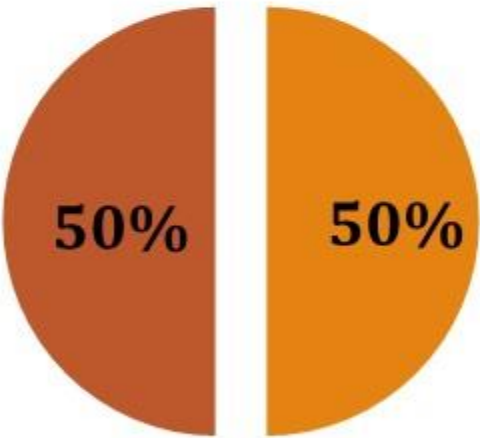
Farms permitted to restock following stamping-out by July 2026 (%)

Percentage of farms permitted to repopulate following stamping out



■ Yes ■ No

Membership in a Breeding Organization

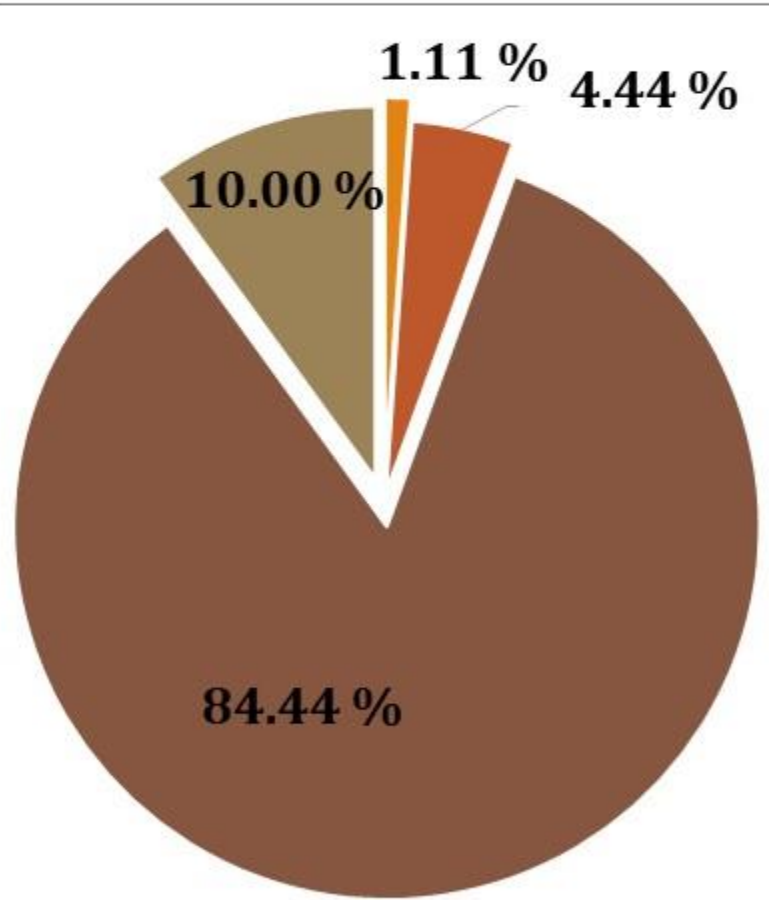


■ Yes ■ NO

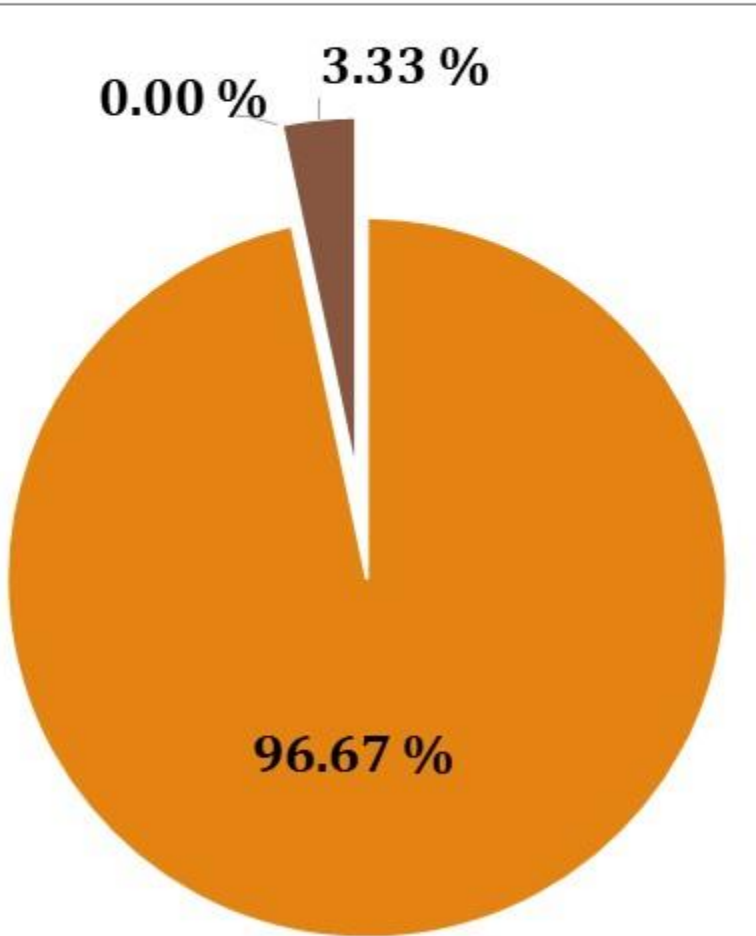


Results and Discussion

Farmers' Assessment of Disease-Control Measures



Perceived Long-Term Decline in Regional Sheep Farming (%)



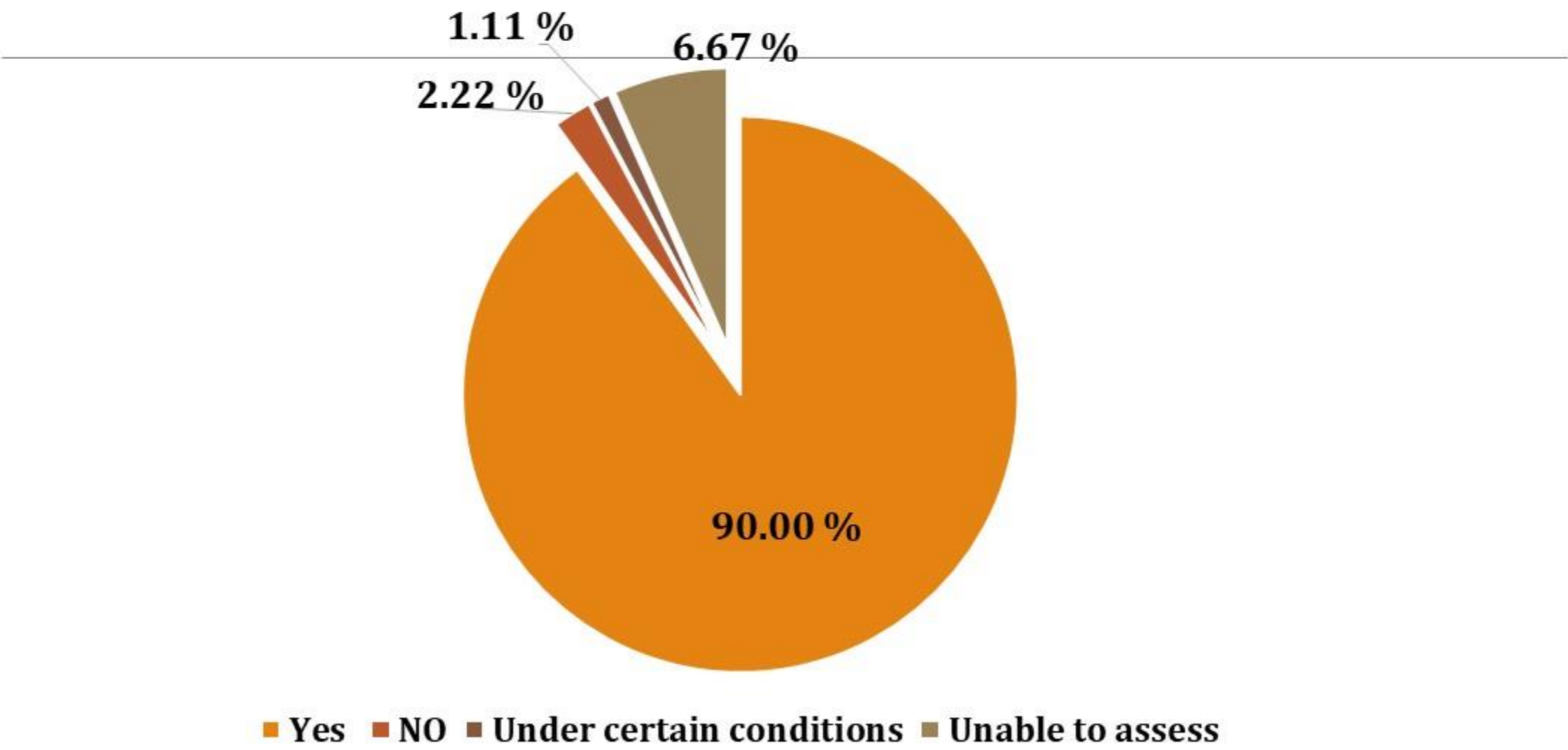
Yes Partially No Unable to assess

Yes No Unable to assess



Results and Discussion

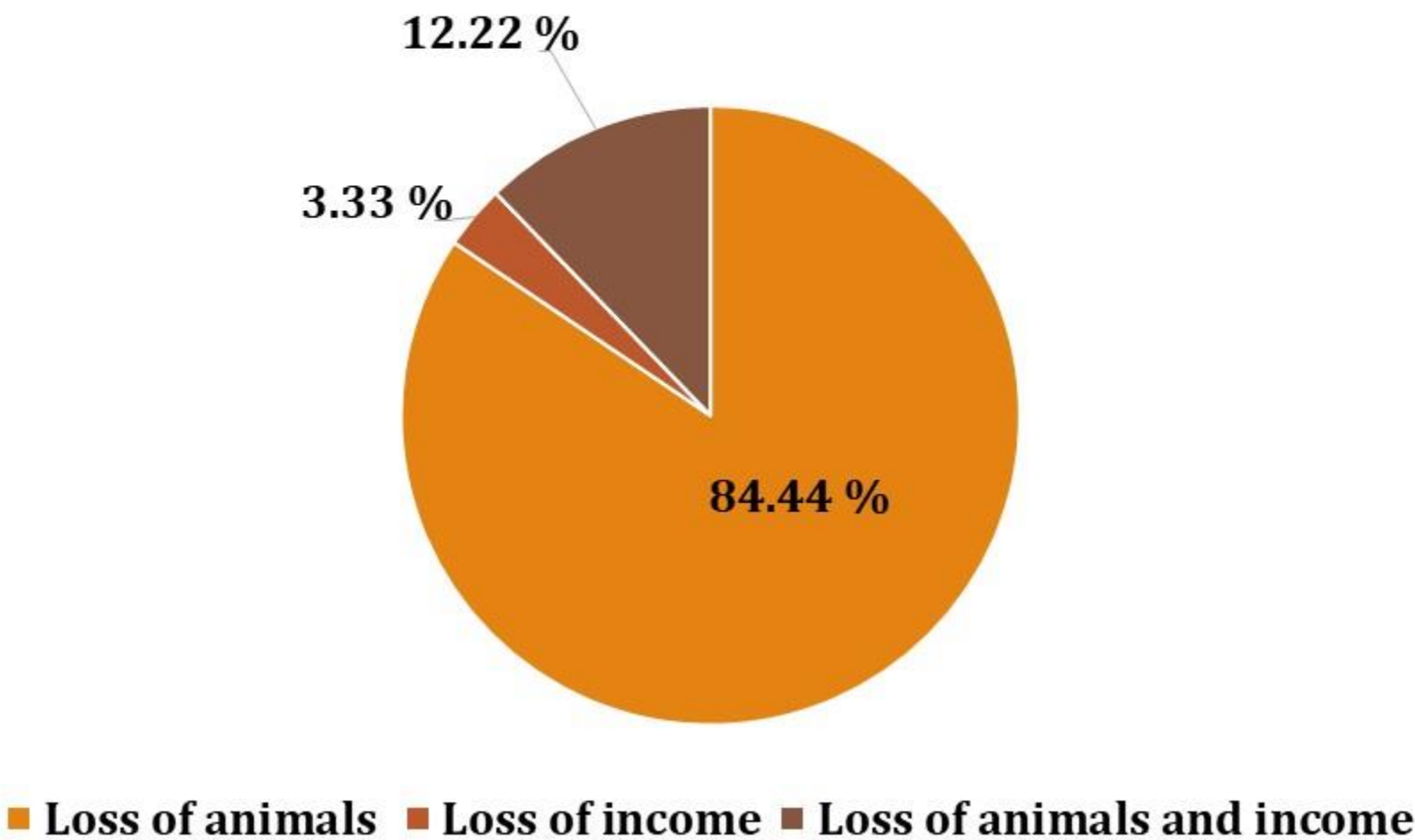
Farmers' Support for Nationwide Vaccination against Sheep Pox



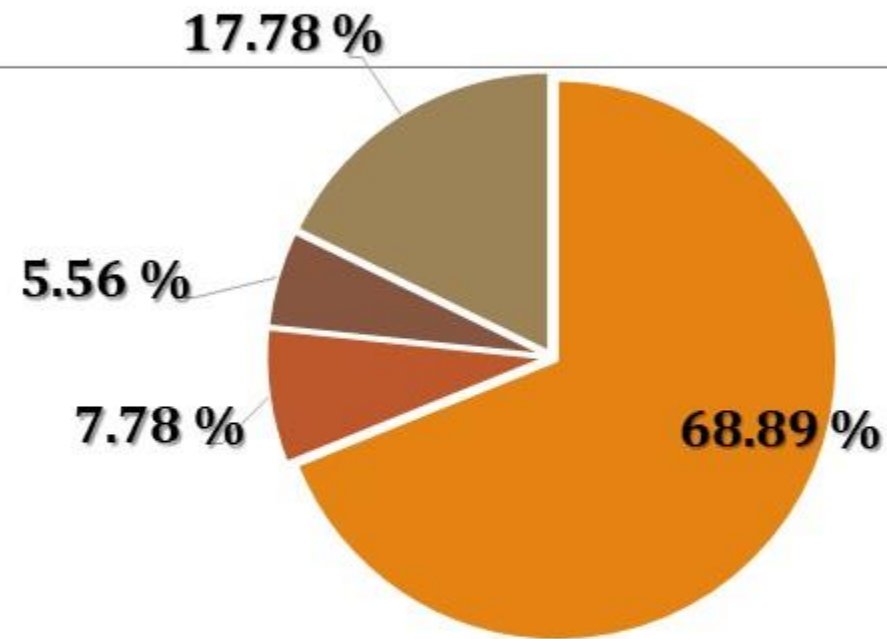


Results and Discussion

Farmers' Assessment of the Most Severe Consequence of Flock Culling



Framers' View on Changes Needed in Future Sheep Pox Control Policy

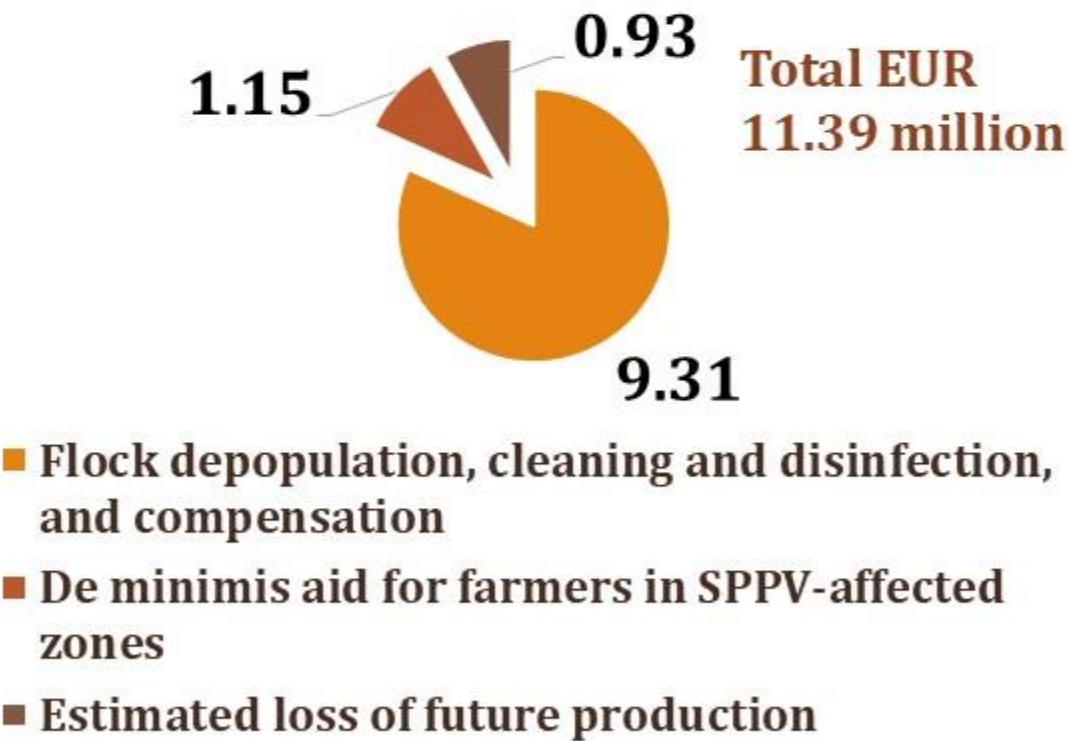


- Vaccination
- Changes in control policy
- Vaccination + changes in control policy
- I cannot assess

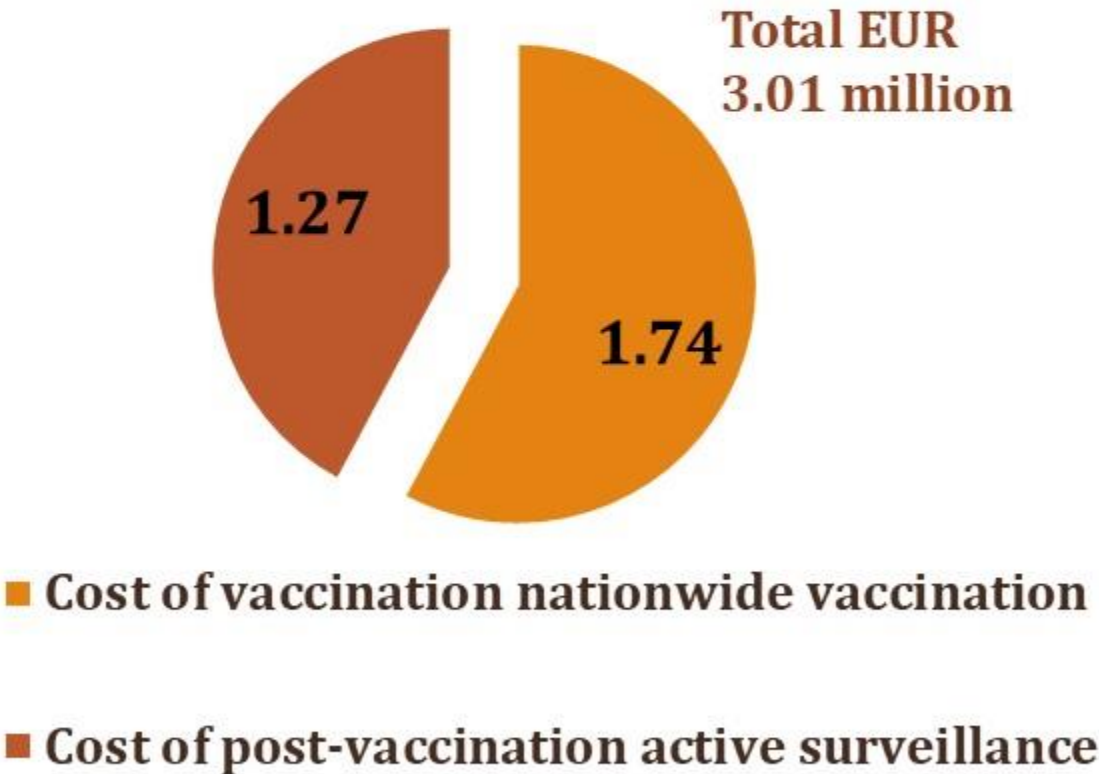


Economic Comparison of Two Sheep Pox Control Strategies

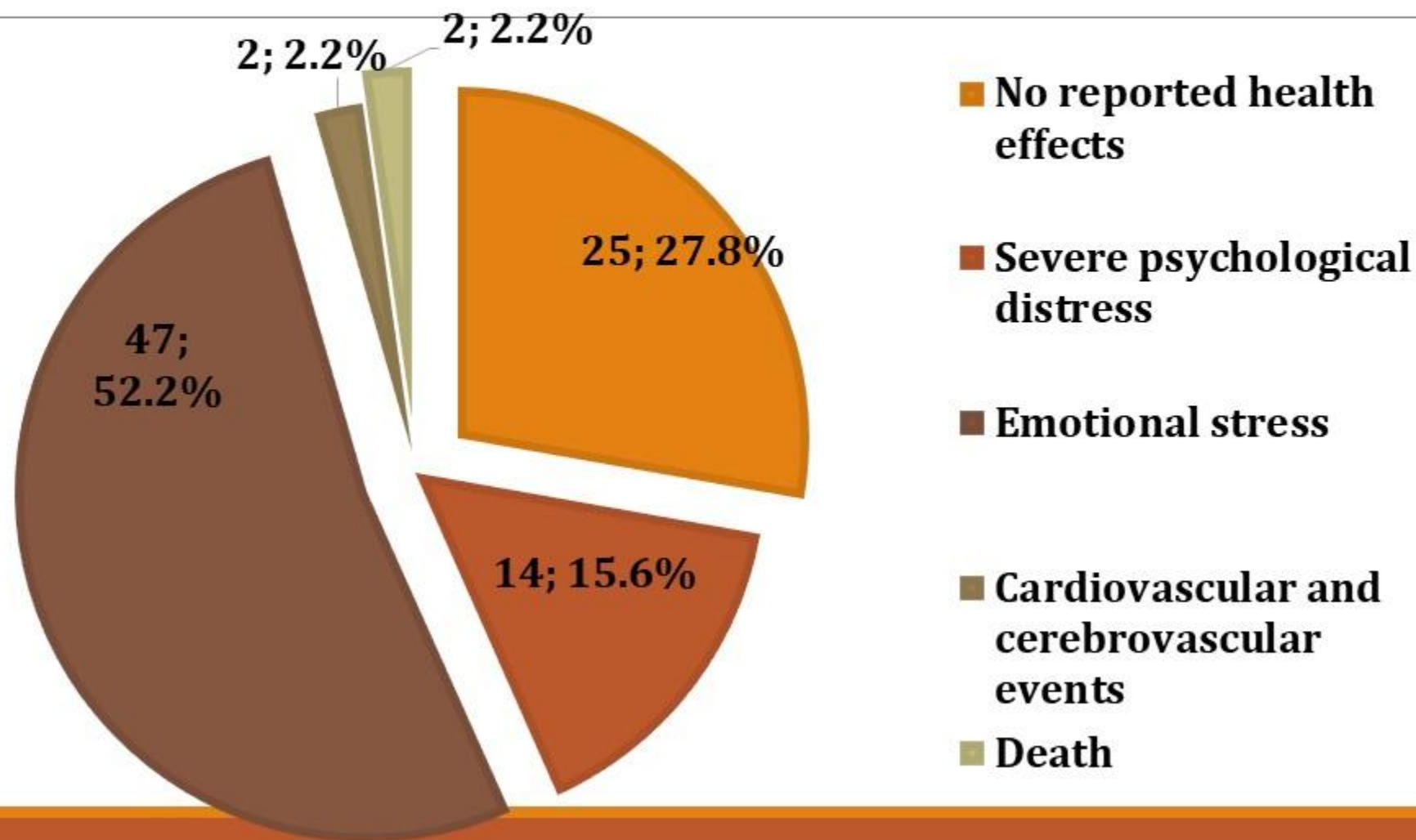
**Costs and Estimated Losses
Associated with Stamping Out Sheep
Pox Outbreaks in 2025 (EUR
million)**



**Costs associated with
nationwide vaccination
(EUR million)**



Reported Psychosocial and Health Effects Following Flock Killing



Conclusions

- Stamping-out alone did not prevent the continued spread of sheep pox and generated substantial economic and structural costs.
- Flock Killing caused long-term consequences: income loss, farm abandonment, delayed restocking and disruption of breeding activities.
- Loss of breeding flocks may threaten accumulated genetic progress and endangered local genetic resources.
- Affected farmers showed strong support for vaccination as an alternative control measure.
- Future control strategies should balance epidemiological effectiveness, economic sustainability, genetic-resource conservation and farmers' psychosocial well-being.



**Thank you for your
attention!**