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FMD and its implications for the dairy sector

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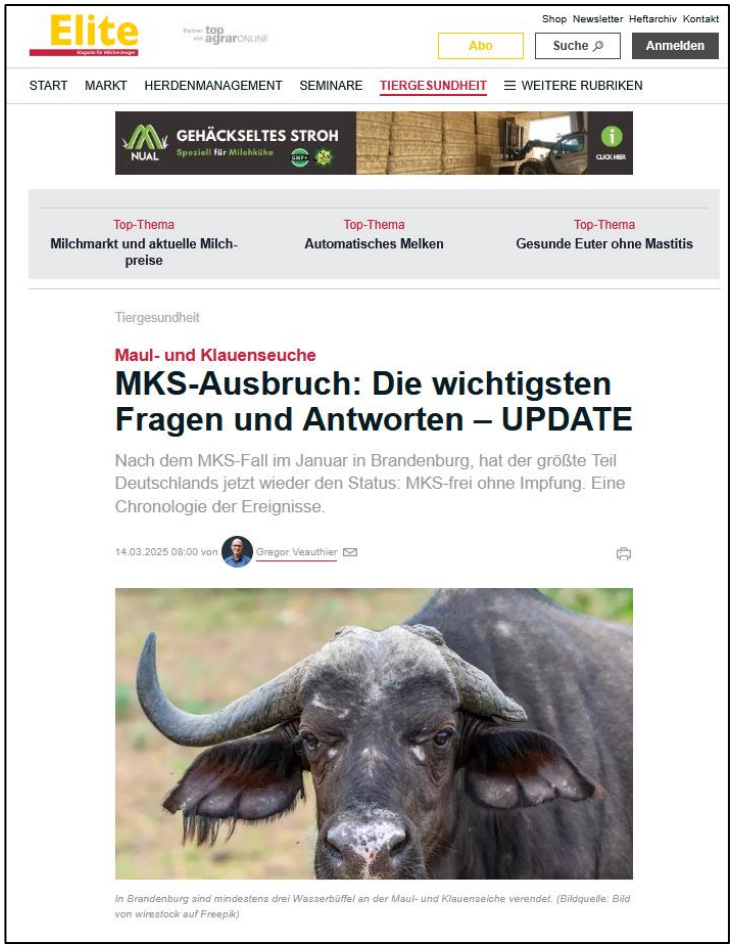
Update on the current situation

FMD: a threat back from never gone

- Although a virus that has been know for a long time, FMD virus is still present in many regions around the world
- Endemically affected regions: Africa, the Middle East and Asia, as well as in a limited area of South America
- It is estimated that FMD is circulating in 77% of the global livestock population

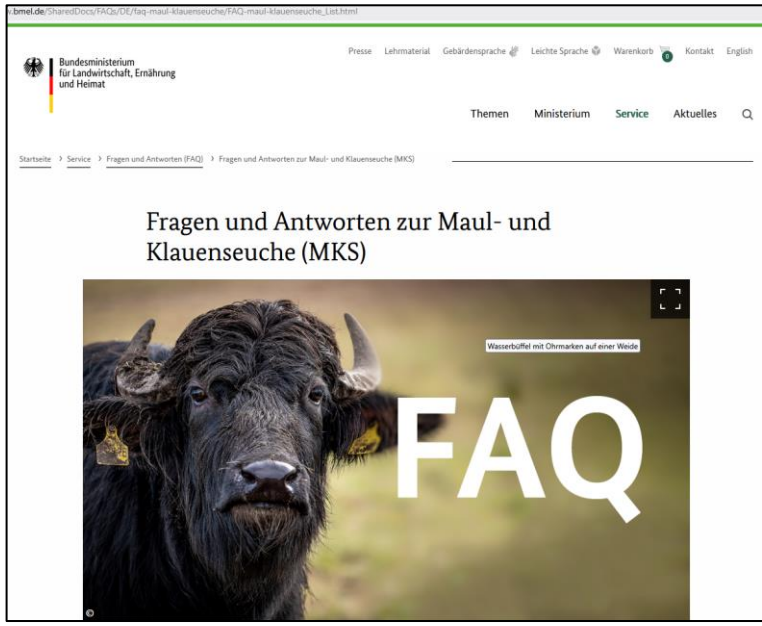
Recent FMD incursions into Europe

- **Germany**: outbreak reported on 10 January 2025
  - First outbreak since 1988
- **Hungary**: outbreak reported on 7 March 2025
  - First outbreak in 50 years
- **Slovakia**: outbreak reported on 21 March 2025
  - First outbreak in 50 years



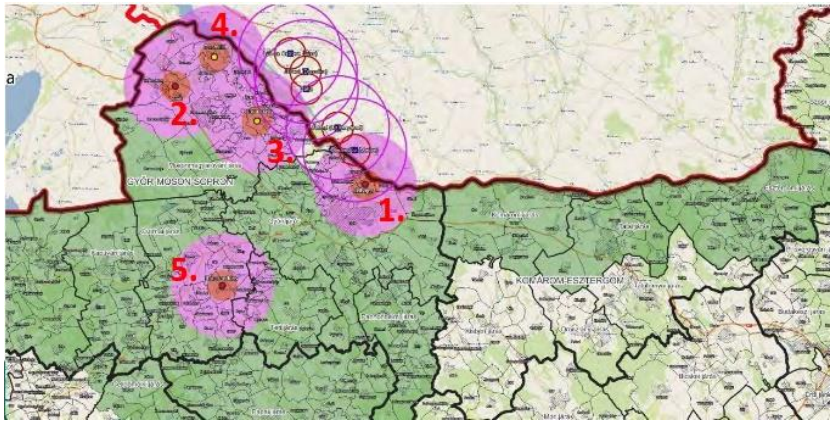
FMD in Germany

- Small herd of 14 water buffaloes
- Deaths occurred on 5/6 January
  - First death was not considered suspicious; carcass was sent to rendering without further testing
  - Upon laboratory investigation, all 14 animals were found to be infected
- Until today, the route of introduction of the virus into Germany and the herd is unclear
  - Suspicion of human error



FMD in Hungary

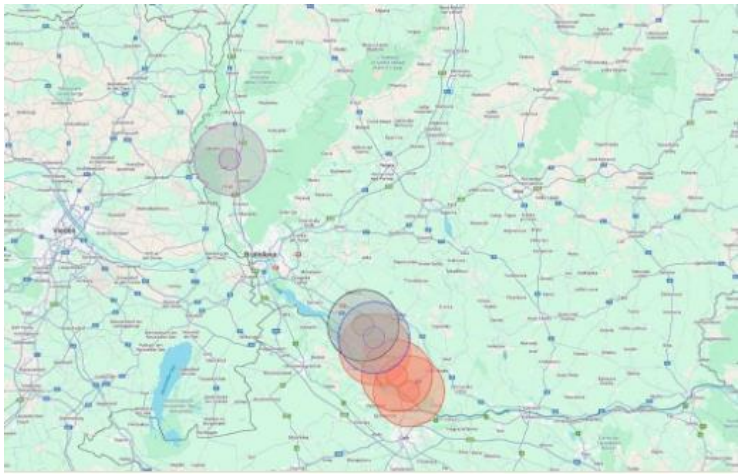
- Outbreaks in 5 cattle farms (as of 28.4.2025)
  - And 3 contact holdings, 2 cattle + 1 pig
- In the first affected farm, non-specific clinical signs started on 3 March
  - Official veterinarian contacted on 5 March
- Until today, the route of introduction into Hungary is unclear
  - NOT related to outbreak in Germany



Source: SCoPAFF 29 April 2025

FMD in Slovakia

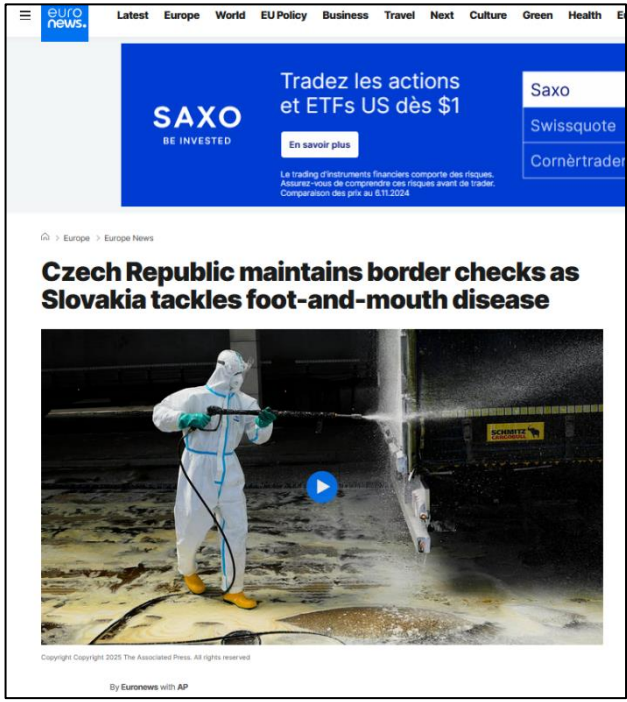
- Outbreaks in 6 cattle holdings (as of 28.4.2025)
- On 20 March, suspected clinical signs were reported on 3 holdings
- Area was already on high alert due to FMD outbreaks in Hungary
- Outbreak is related to Hungary



Source: SCoPAFF 29 April 2025

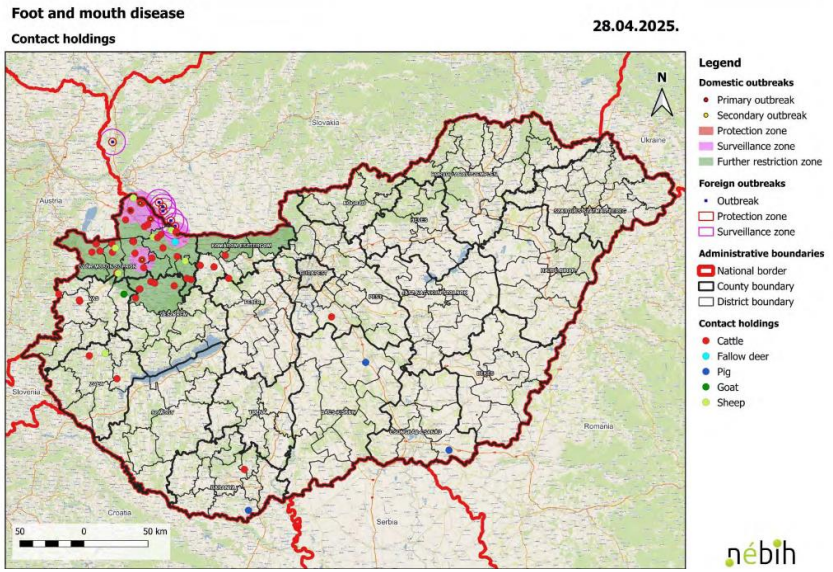
Control measures (selection only)

- Culling of all susceptible animals on the affected holdings, followed by cleaning and disinfection
  - Hungary and Slovakia applied emergency suppresive vaccination prior to the start of the culling
- Movement restrictions in the zones
- Ban on «round tours» for milk trucks in the zones, etc
- Biosecurity checks on farms
- Random checks on the road, checks at border crossings



Follow-up investigations on contact farms (example Hungary)

- Direct contact holdings
- Via rendering plant truck
- Via milk collecting truck
- Via driver of the milk collecting truck
- Via company of the control of milk production
- Via bedding transport
- Via workers
- Via live animal transport
- Via inseminator



Source: SCoPAFF 29 April 2025

Key characteristics of the FMD virus

FMD virus

- Virus affects all cloven-hoofed animals
- Characteristic clinical signs include salivation and blisters in mouth, feet and udder
  - But large variation in clinical picture exists between animal species
- An RNA-virus with 7 serotypes
  - O, A, C, Asia-1, SAT-1, SAT-2, SAT-3
  - Further differentation within the serotypes
- No cross-protection across serotypes
  - Vaccines need to be specific for the virus that is circulating in a population

Excretion of the virus and related transmission pathways

Excretion via:	Breath	Secretions and excretions	Animal products
Virus present in e.g.:	Aerosols, droplets	Saliva, vesicular fluid	Milk, meat, organs, rest of carcass
Virus transmits through:	• Physical proximity • Inhalation of aerosols and droplets	• Direct contact with secretions/ excretions • Direct contact with contaminated surfaces/fomites • Indirect contact through aerosols from secretions/ excretions	• Ingestion of contaminated products

FMD virus in milk

- FMD virus is excreted in milk
- Inactivation of the virus in milk can be achieved by applying a process of 72°C for at least 15 seconds twice
  - Or equivalent treatments that have been demonstrated to inactivate FMD virus in milk
- Ultra-high temperature (UHT) milk and its derivatives are considered safe commodities independent of the FMD status of the country

The importance of transport

- Livestock farms are connected to each other through many different types of transport, e.g.:
  - Transport of live animals
  - Transport of carcasses
  - Feed transport
  - Milk collection
- Transport poses a high risk of virus spread:
  - Through emission of the virus from the vehicle (e.g. live animals, milk truck)
  - As a fomite carrying contaminated materials (e.g. manure on tyres)
  - Through the drivers (e.g. contaminated clothes or shoes)

A few thoughts on airborne transmission

- Infected animals excrete virus in their breath, so airborne transmission is possible, but:
  - How far can the virus fly?
  - Under which conditions?

A few thoughts on airborne transmission

- Aerosol transmission requires favorable conditions:
  - Large group of infected animals excreting large amount of virus (in particular pigs)
  - Favorable climatic conditions (temperature, humidity)
  - Low dispersion in the air (gentle, stable winds)
  - Large group of highly susceptible animals (in particular cattle)
- Probability of airborne transmission decreases with distance
- Direct or indirect contact with infected animals or contaminated surfaces/fomites/products has a higher relative importance

Implications of an FMD outbreak for the dairy sector

Far-reaching implications in primary and secondary industry

Animals and milk supply

- Culling of animals on affected farms
- Prohibition of milk delivery
- Need for milk holding capacity on farm

Transport

- Transport bans or transport restrictions within affected zones
- Increased transport costs

Trade

- Restrictions in export
- Oversupply on domestic market

Price

- Price erosion in international and domestic markets
- Cost increase for raw materials

Regaining freedom from disease

- According to international standards:
  - **3 months** after the last infected animal was disposed of, if no vaccination was used and adequate surveillance was conducted
  - **3 months** after the last vaccinated-to-kill animal was disposed of and adequate surveillance was conducted
  - **6 months** after the last infected animal was disposed of or the last animal was vaccinated, if vaccination-to-live was used and adequate surveillance was conducted
- Regaining international market positions may take much longer!

Measures to reduce the risk of introduction and spread of FMD

FMD prevention is a shared responsibility

- Every actor in the dairy sector has a role in reducing the risk of introduction and spread of FMD
  - Livestock owners
  - Dairy processors
  - (and all other actors including the state)

From the perspective of a livestock owner

- Introduction of new animals from reliable sources
- Quarantine period for new animals
- Application of biosecurity measures for visitors, vehicles and staff
- Reduce movements and contacts between holdings
  - E.g. a shared bull
- Restrict access of people to animals
- Restrict access of vehicles
  - Feed truck, milk truck, etc
- Good clinical observation of the animals
- Early reporting in case of clinical signs

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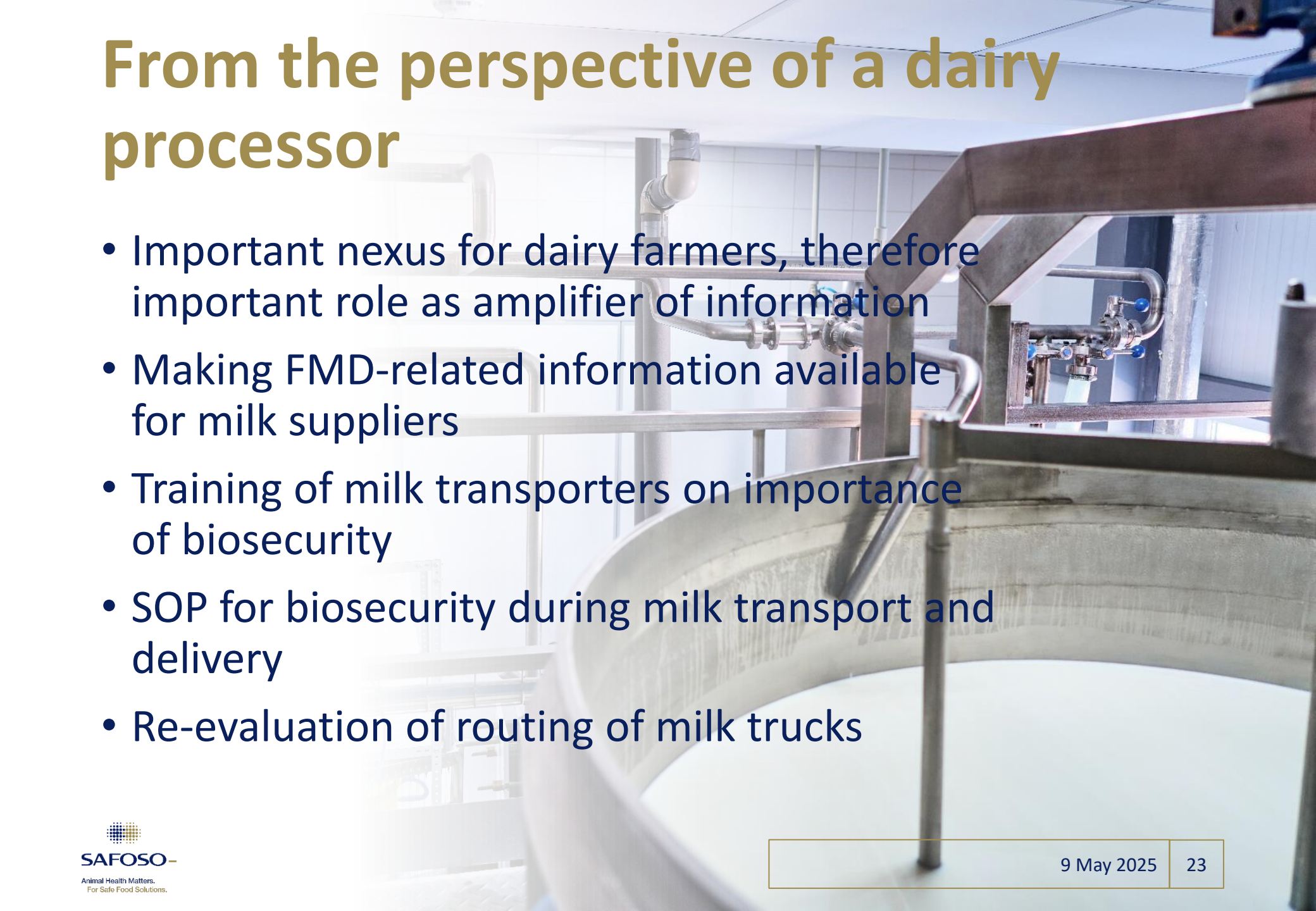
From the perspective of a dairy processor



- Important nexus for dairy farmers, therefore important role as amplifier of information
- Making FMD-related information available for milk suppliers
- Training of milk transporters on importance of biosecurity
- SOP for biosecurity during milk transport and delivery
- Re-evaluation of routing of milk trucks

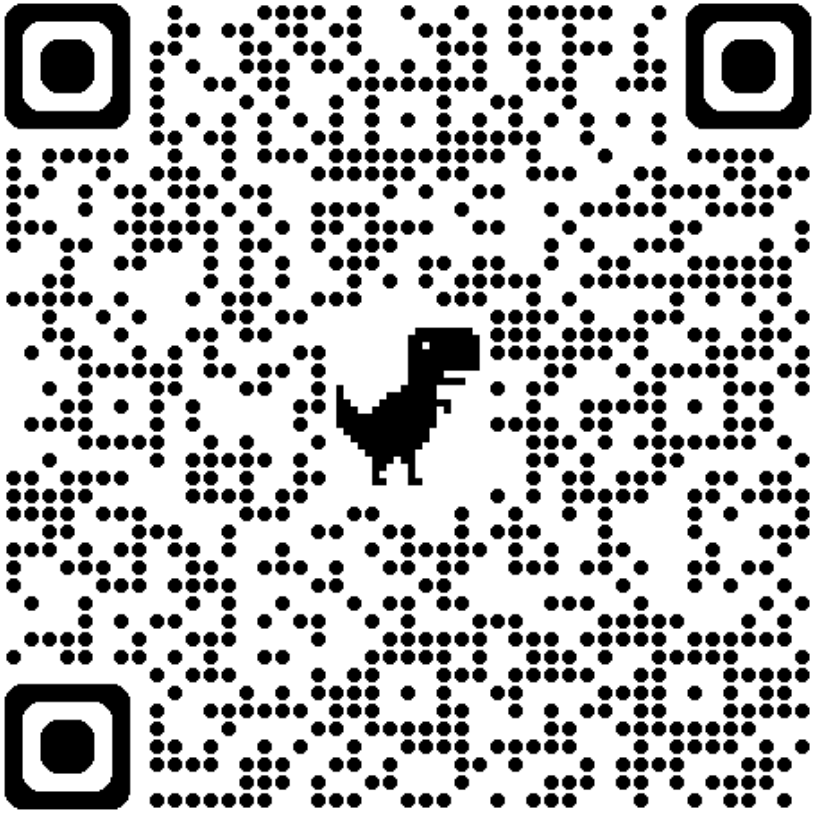
Vaccination

- Good FMD vaccines are available
- In many FMD-free countries including the EU, preventive FMD vaccination is prohibited
  - Member States can choose to apply emergency vaccination in case of an outbreak
  - Vaccination-to-kill *vs* vaccination-to-live
- The decision to vaccinate or not in case of an emergency is a complex decision
  - Epidemiological considerations
  - Trade and economic considerations
  - Considerations on time-to-delivery of the vaccines
  - Logistical considerations

Wrap-up

- FMD is a disease that seems exotic and far away, but can occur at any time
- The role of unintentional human error is frequently underestimated
  - Suboptimal biosecurity compliance
  - Missing clinical signs, delayed reporting
  - Continued direct and indirect contacts between holdings
- Preparedness is key
- Awareness is a prerequisite

More information in Ukrainian:

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Thank you!