

# Scrapie in Iceland

history – actions – success

TSE EURL – Rome  
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SARPUR

Byggðasafnið Skógum

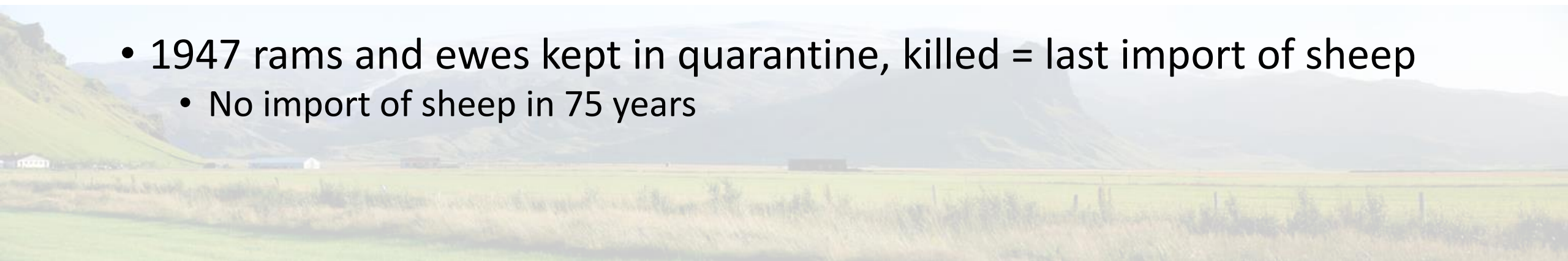






# Import of sheep – serious diseases

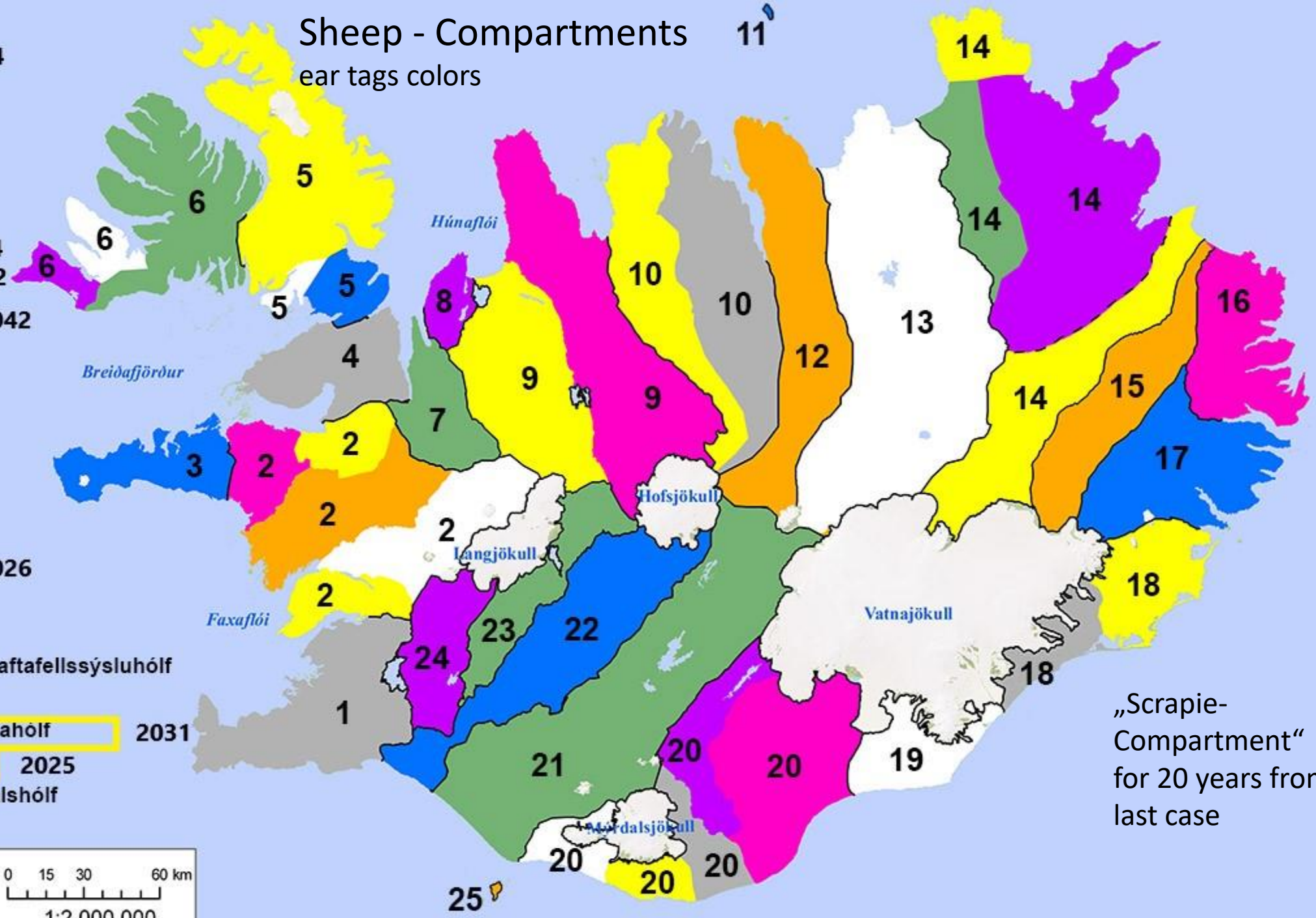
- 1874 rams originated from UK
  - Scrapie
- 1933 rams and ewes from Halle in Germany
  - Maedi/visna (stamping out 300.000 sheep – eradication) = Iceland was splitted up to about 40 Compartments
  - Paratuberculosis (vaccination)
- 1947 rams and ewes kept in quarantine, killed = last import of sheep
  - No import of sheep in 75 years



# Sheep - Compartments 11

ear tags colors

- 1 Landnámshólf 2024
- 2 Vesturlandshólf
- 3 Snæfellsneshólf
- 4 Dalahólf
- 5 Vestfjarðahólf eystra
- 6 Vestfjarðahólf vestra
- 7 Miðfjarðarhólf 2044
- 8 Vatnsnesshólf 2042
- 9 Húna- og Skagahólf 2042
- 10 Tröllaskagahólf
- 11 Grimseyjarhólf
- 12 Eyjafjarðarhólf
- 13 Skjálfandahólf
- 14 Norðausturhólf
- 15 Héradshólf
- 16 Austfjarðahólf
- 17 Suðurfjarðahólf 2026
- 18 Suðausturlandshólf
- 19 Örfæhólf
- 20 Eyjafjalla- og Vestur-Skaftafellssýsluhólf
- 21 Rangárvallahólf
- 22 Hreppa-, Skeiða- og Flóahólf 2031
- 23 Biskupstungnahólf 2025
- 24 Grímsnes- og Laugardalshólf
- 25 Vestmannaeyjahólf



„Scrapie-Compartment“  
for 20 years from  
last case

# Scrapie - distribution in Iceland

- Farm – Skagafjörður 1874
  - Northland the first 75 years
  - Vestfjörds 1953, Reykjavík 1966 , Borgarfjörður east 1968
  - From 1970 wide spread, South and East
- The spread of scrapie in top 1986 – sheep population in top
- Hobby farms at Fjárborg/Rvk 1978 – first stamping out action taken – affected herds not other herds - eradication of the disease
- Scrapie regulation 1986 – the goal was to eradicate scrapie in the whole country
  - 104 known scrapie farms
  - Scrapie in 24/37 compartments
  - About 20% mortality
  - Nervalgia – painful



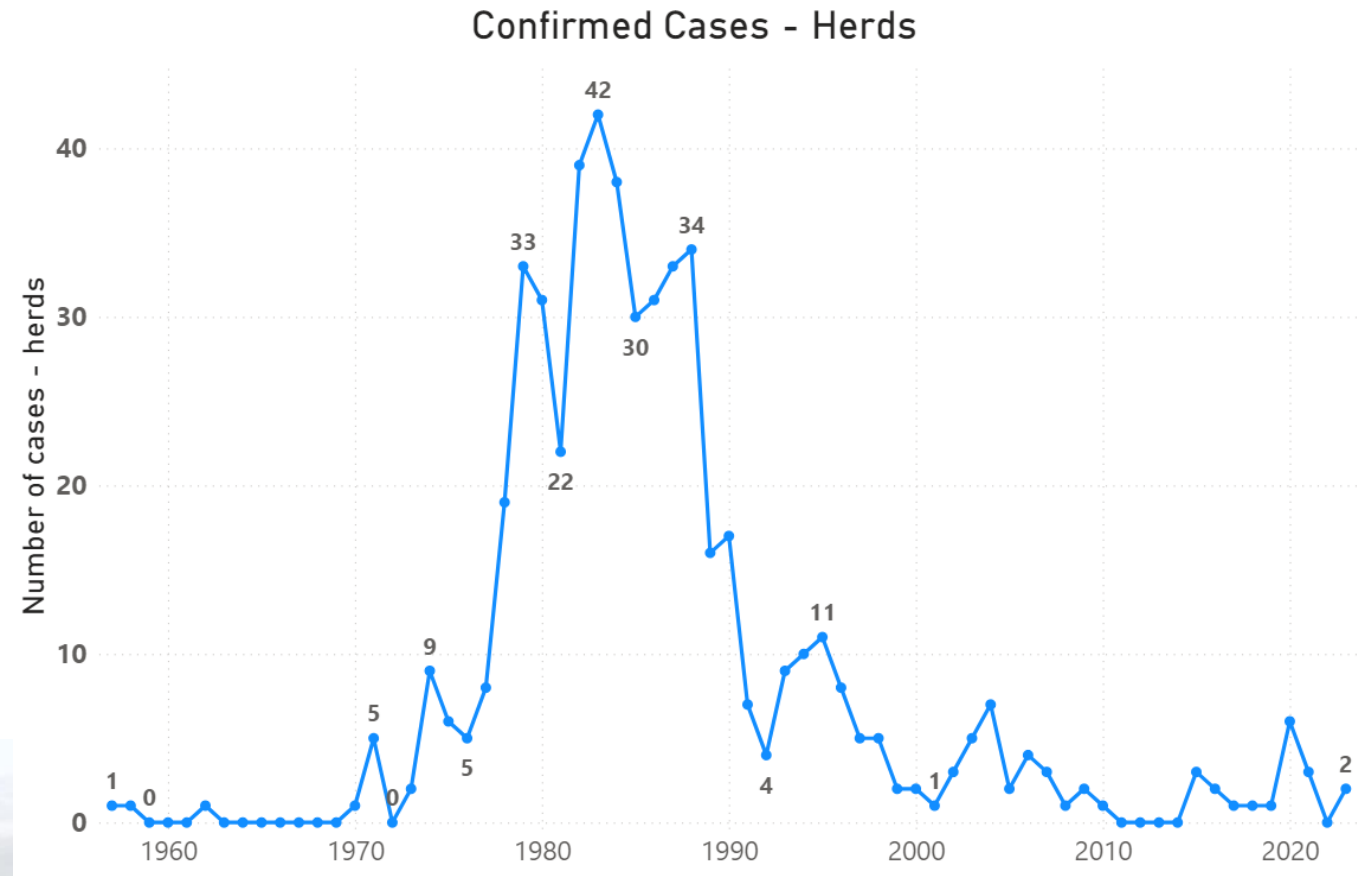
# Administrative actions – stamping out

- Before 1986 – many scrapie farms without confirming with samples = clinical diagnostic
- From 1986 – more samples but not from all potential herds
- Herds with confirmed scrapie (Histologie, ELISA/Western Blot)
  - Affected herd – stamping out
  - Whole area – stamping out on every farm (last time: South 2004; 2.000 sheep on 11 farms)
- <https://landupplysingar.mast.is/>



# Classical scrapie - sheep

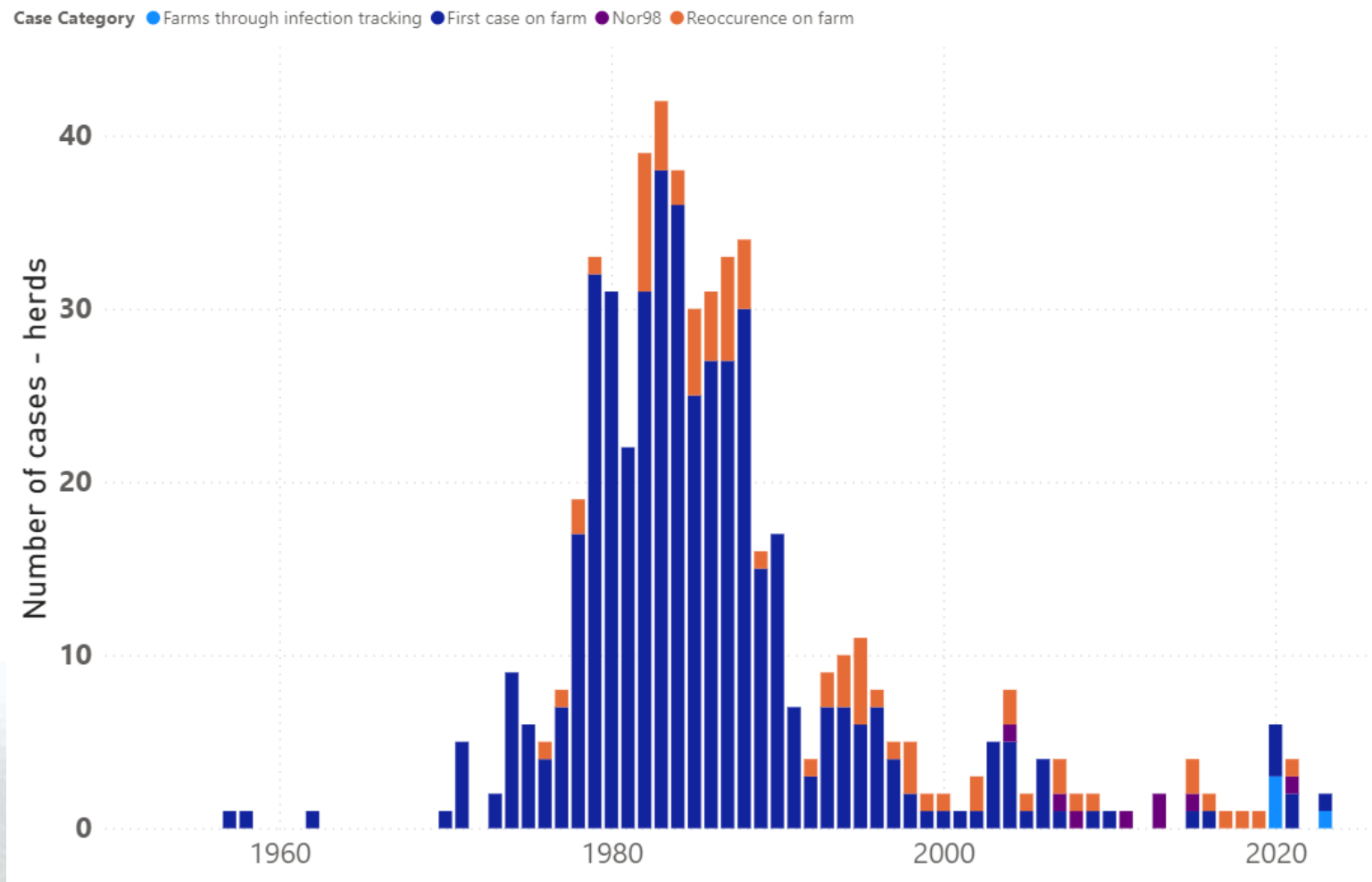
- 1957 – first confirmed, histological diagnose
- Prior to 1985 mainly clinical diagnoses, not on this graph
- Post 1980 increase of sampling, stamping out begins
- 1986 stamping out formally begins
- [Microsoft Power BI](#)





- 2004 – first NOR98
- Reoccurrence on farms
- After stamping out
- Removing material
- Cleaning & Disinfection
- No sheep for 3 years, now for 2 winters (housing period)

### Confirmed Cases - Herds



# Removal – digged on farm/burned





# Removed - Replaced





# Removed – new material/soil





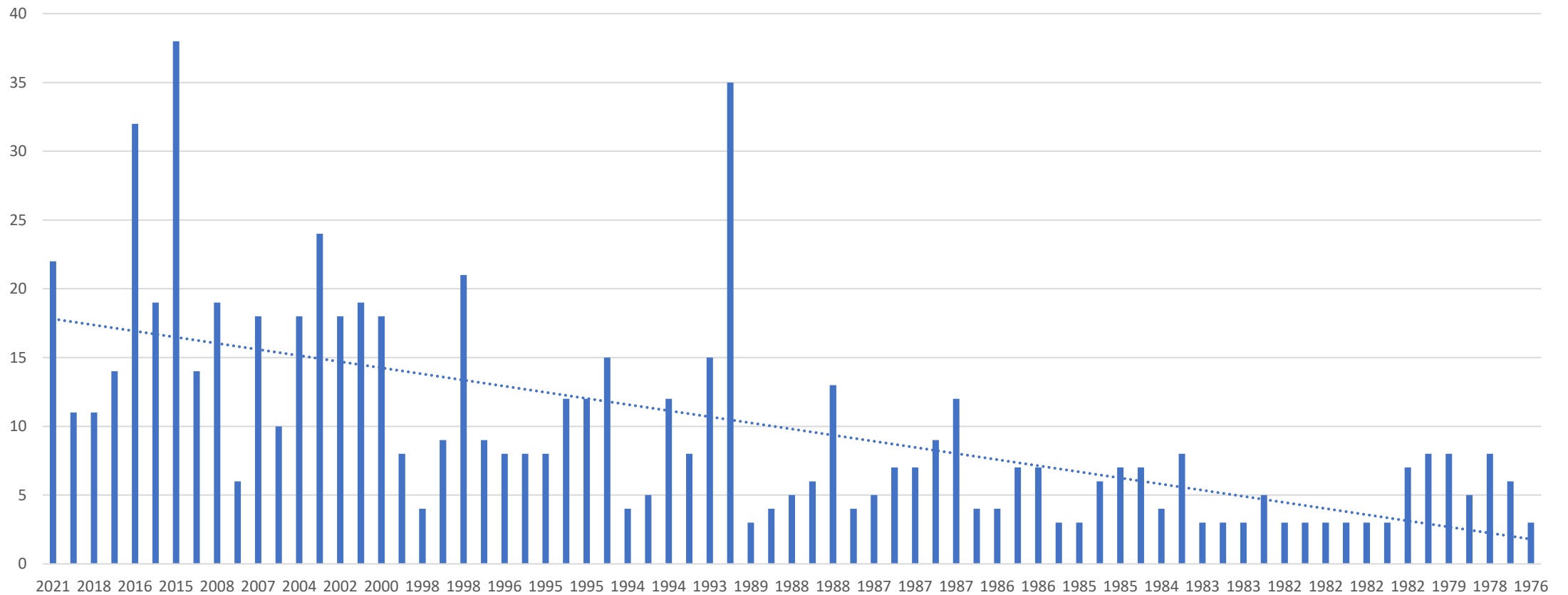
# „Scrapie compartments“ – 20 years

- Buying/movements of breeding sheep needs approval - only from compartments that have never had scrapie
- Selling sheep from a farm - prohibited
- Housing sheep from other farms - prohibited
- Hay, straw etc – movements needs official approval
- Machines/equipments that can carry prions – movements only after C&D and vet certificates

Official control - Big challenge

# New infections ?

Years between reoccurrence of scrapie on the same farm





# Additional tools against scrapie

- Breeding with ARR and other „resistant likely genotypes“ started 2022 – takes some years
  - Only one farm found with ARR/xxx, no ARR/ARR
- Affected herds - until the breeding is wide spread
  - Sheep with confirmed scrapie have spread the disease in the herd for months/years
  - Stamping out stops the disease at the farm – stops the pain by affected sheep = AW
  - Stamping out stops the distribution to other herds
- Other options:
  - Option 2; culling only the sensitive sheep
  - Option 3; culling only the sheep with symptoms – AW issues, painful till you see the symptoms
  - Isolation of the herd to avoid distribution to other herds