PRRS Eradication in Danish sow herds during the period 2020 - 2024

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ESPHM, 21 May 2025

SUPPORTED BY
Danish Pig Levy Fund
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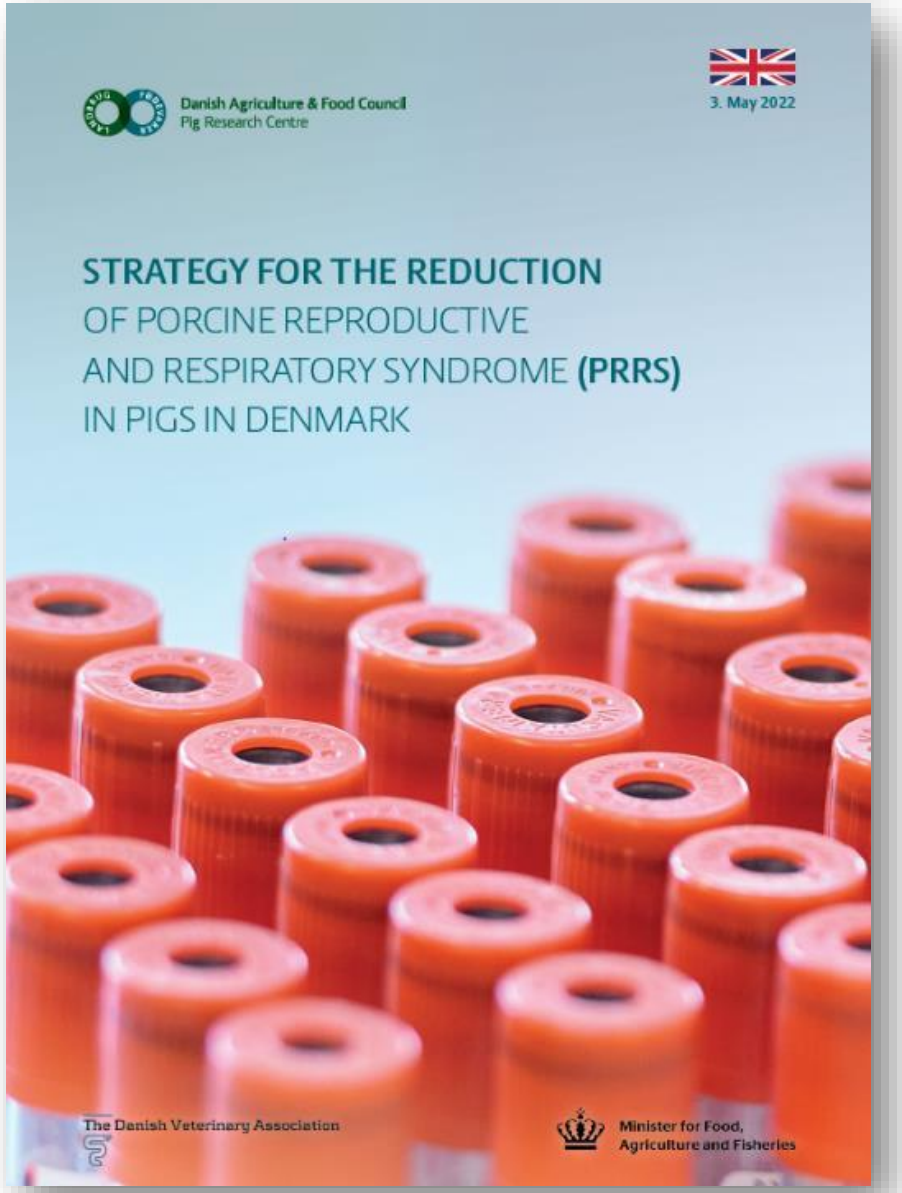

Danish PRRS control programme 2022

Danish PRRS REDUCTION

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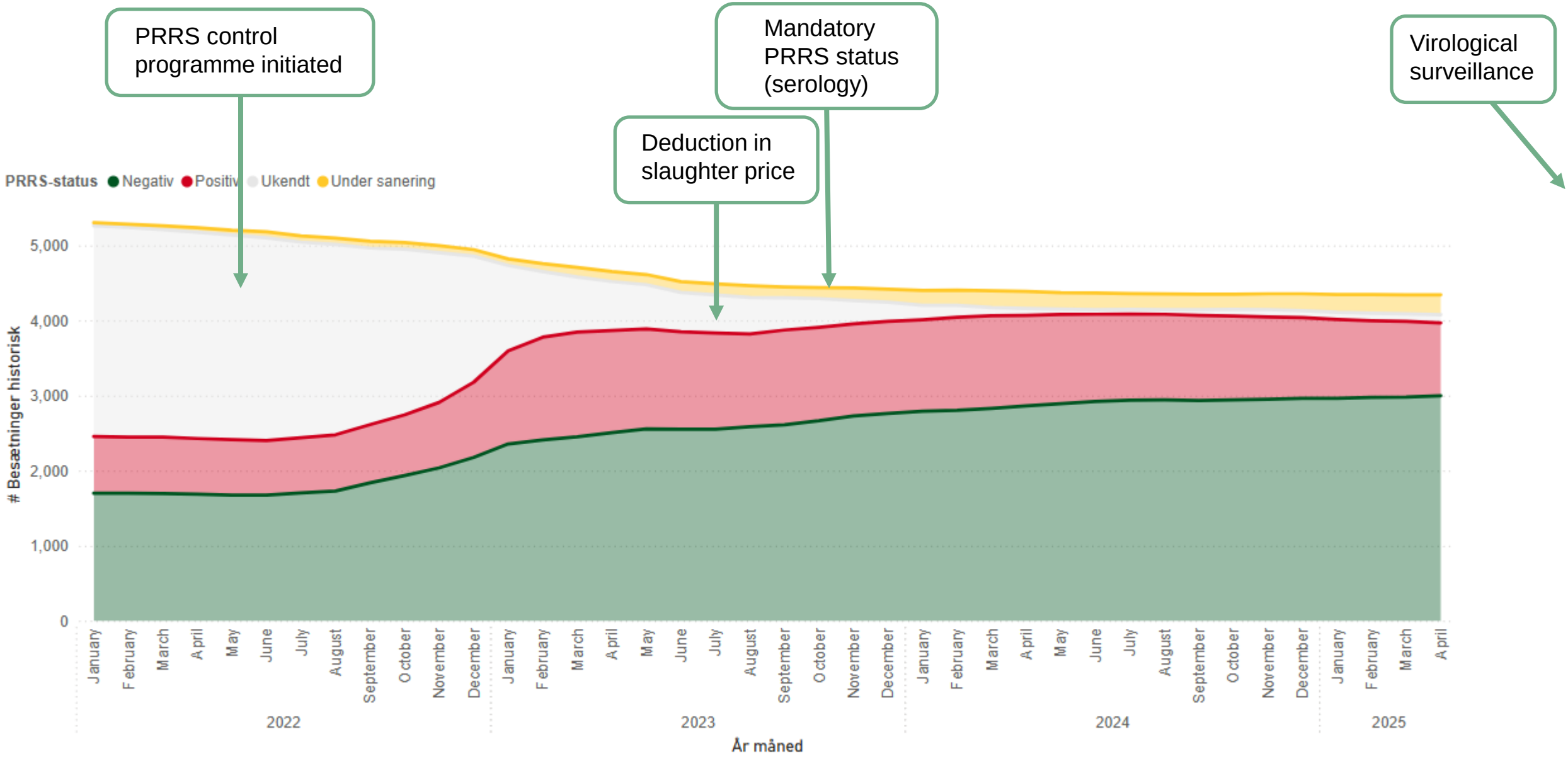

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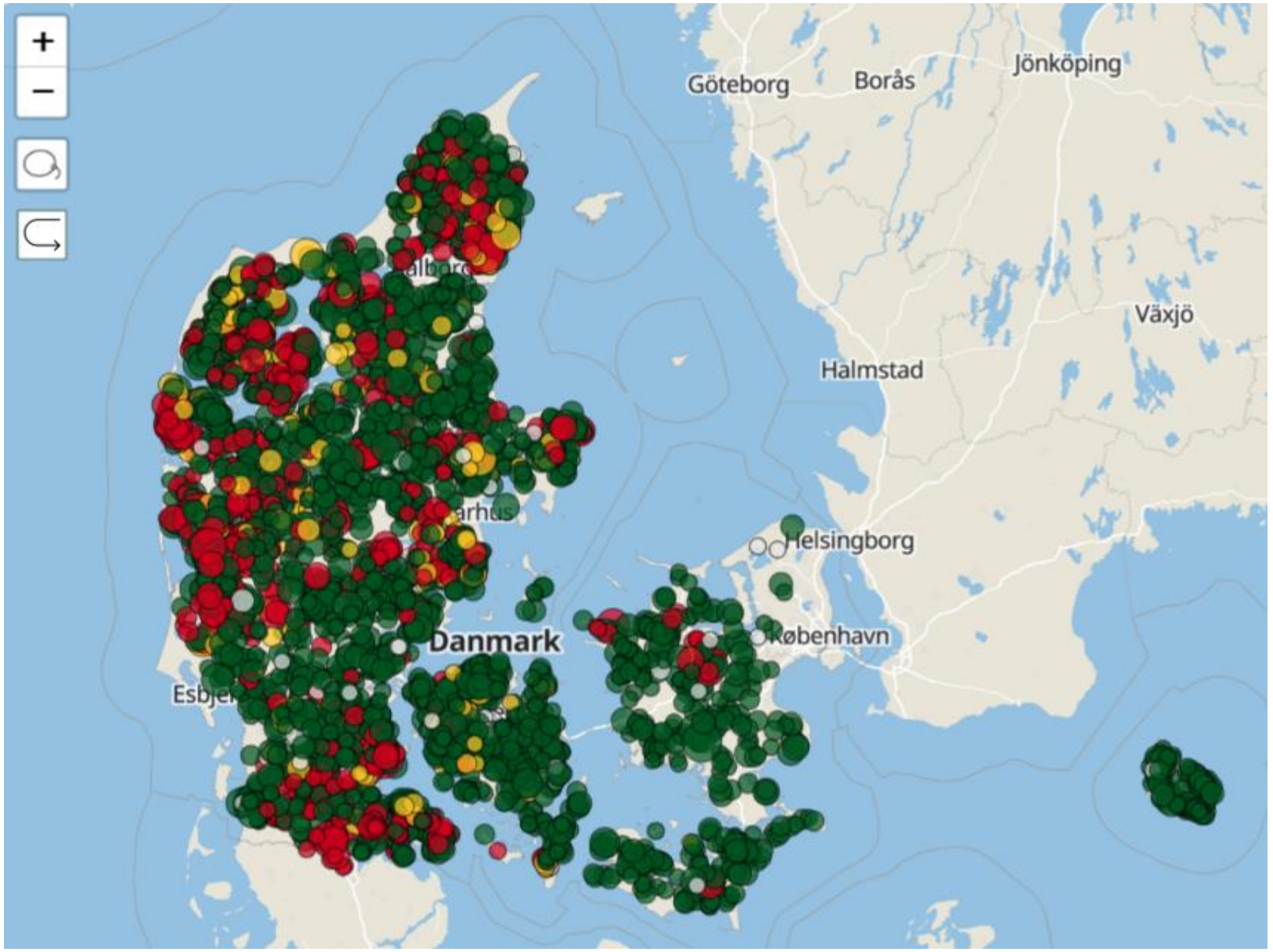

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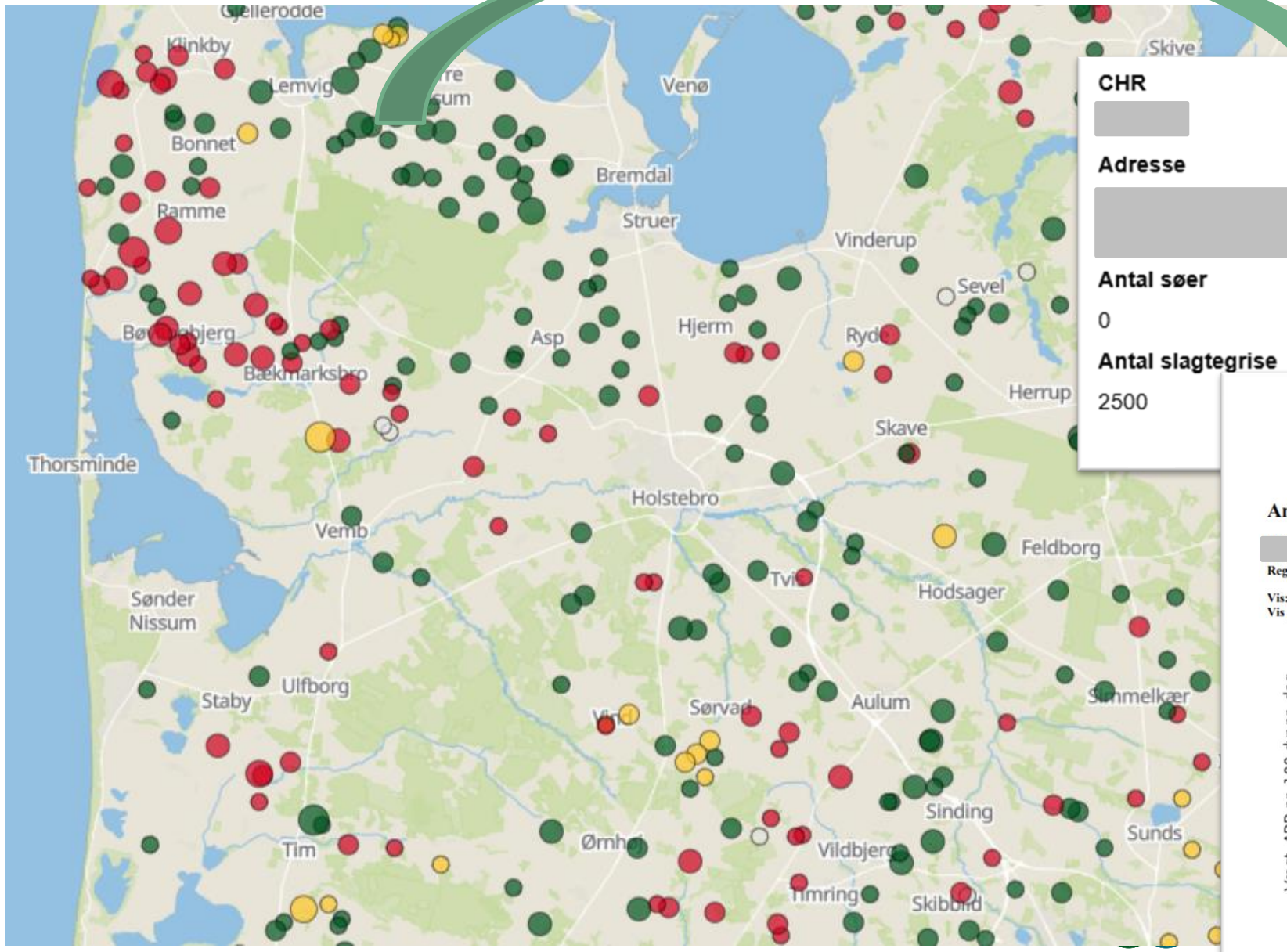


CHR	Ejernavn
Adresse	**Sundhedsstatus**
	PRRS-dekl. (Negativ)
Antal søer	**Antal smågrise**
0	3800
Antal slagtegrise	**VPE**
2500	

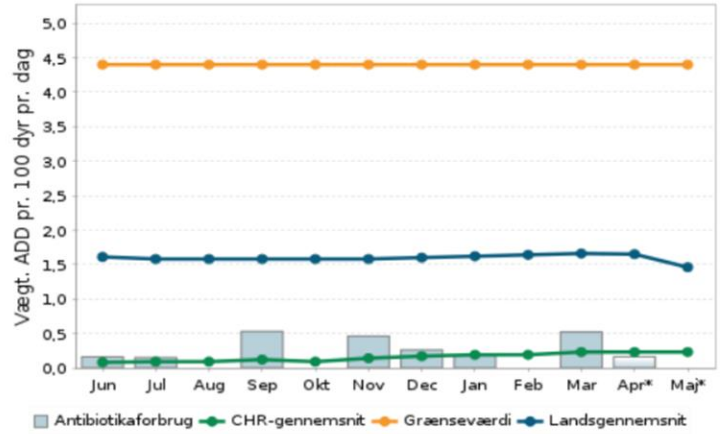
Ministeriet for Fødevarer, Landbrug og Fiskeri
Fødevarestyrelsen

Dato: 01.05.2025 15:12:57

Antibiotikaopgørelse fra juni 2024 til maj 2025

Region: Region Midtjylland | **Kommune:** Lemvig | **Veterinærenhed:** Nord

Vis: Totalforbrug
Vis gennemsnit pr.: 9 mdr.



* Antibiotikaforbruget i disse måneder er ikke endeligt opgjort og kan derfor ændre sig.

Master's thesis,
by Marie Fisker Kristensen,
June 2024

PRRS eradication in Danish sow herds during the period 2020 - 2024

Aim

To describe the number and succes rate of PRRS eradications on Danish sow farms, and to quantify the effect on antimicrobial use and risk of re-infection of farms completing an eradication programme.

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PRRS eradication on Danish sow farms

Partial depopulation

- **L**oad
- **C**lose
- **H**omogenize

- McRebel
- AASV guidelines

Total depop / repop

- All pigs removed
- Clean and disinfect
- Downtime (min 7 days)
- Seronegative gilts introduced

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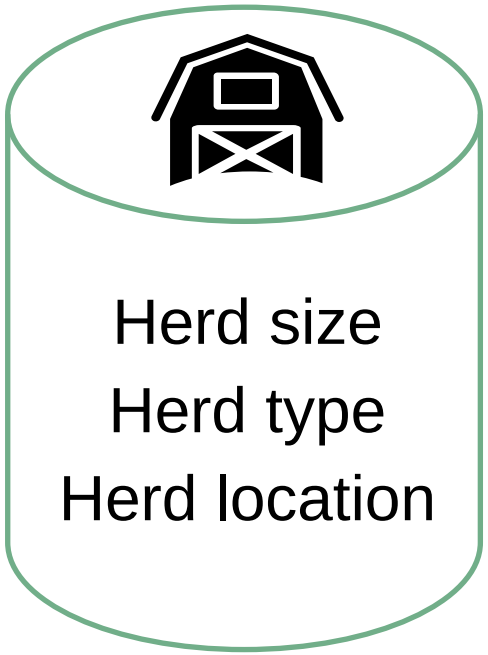
Materials & Methods

Central Husbandry Register (CHR)



Herd size
Herd type
Herd location

VetStat database

Specific Pathogen Free Register (SPF)

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Defining the study population

* Sow farms
* January 2020 – March 2024

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Defining the study population

* Sow farms
* January 2020 – March 2024

TOTAL depop / repop

Positive

Under eradication

Negative

PARTIAL

Antibody positive

Positive

Sentinels inserted and 20 neg serum samples → 6 months

Under eradication

Negative

+20 neg serum samples

Positive

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Defining the study population

* Sow farms
* January 2020 – March 2024

TOTAL depop / repop

Positive

Under eradication

Negative

Positive unstable

Positive stable

Provisional Negative

AASV

Negative

PARTIAL

Positive

Under eradication

Positive

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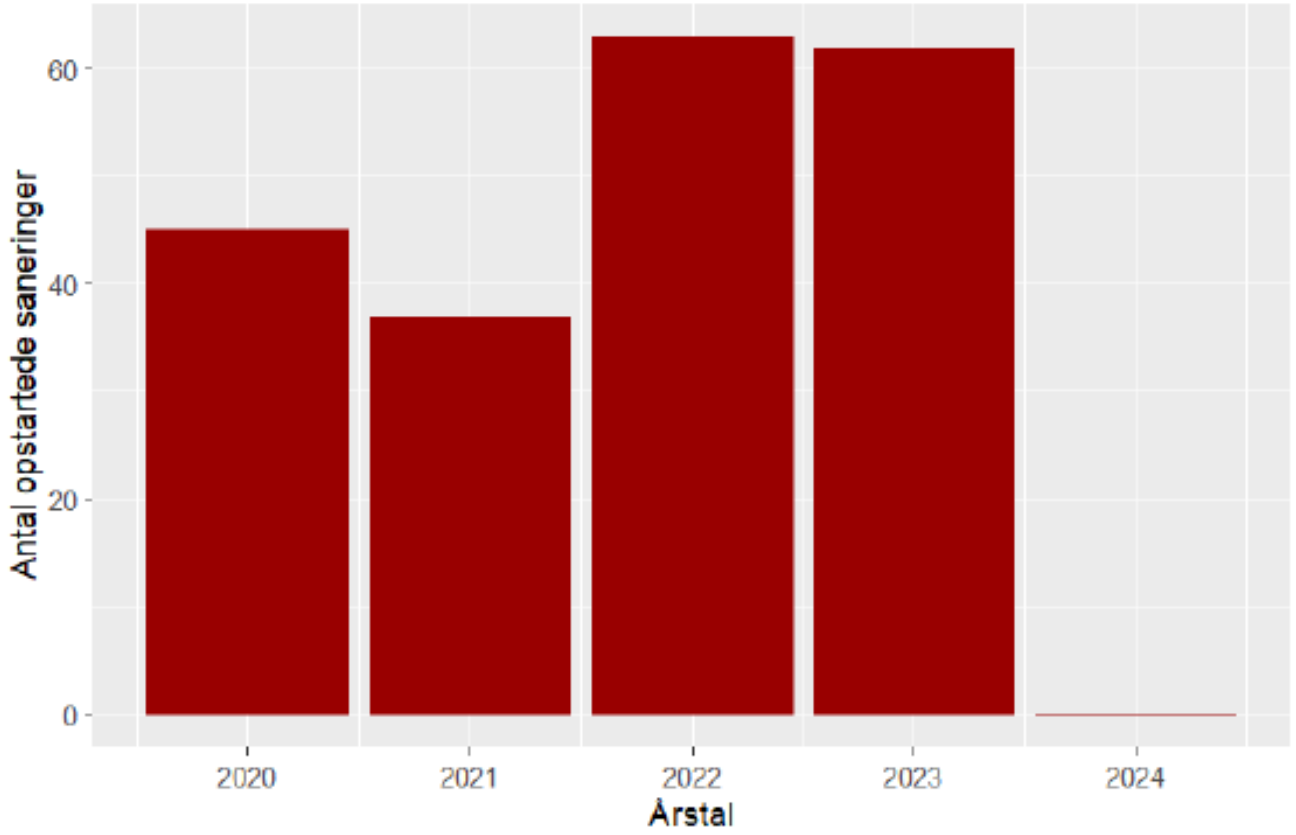
Results
Number of sow farms performing a PRRS eradication



Figur 4. Projektbesætninger saneret for PRRS fordelt på år for saneringsopstart

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Results
Number and type of PRRS eradications

	Total	PRRS1	PRRS2	PRRS1+PRRS2
All eradications	207	99	71	37
Partial depopulation	159 (76.8%)	82 (82.8%)	53 (74.6%)	24 (64.9%)
Depop / repop	48 (23.2%)	17 (17.2%)	18 (25.4%)	13 (35.1%)

Results
Partial PRRS eradications – success rate

	Total	PRRS1	PRRS2	PRRS1+PRRS2
All eradications	207	99	71	37
Partial depopulation	159	82	53	24
Depop / repop	48	17	18	13

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Results
Partial PRRS eradications – success rate

	Total	PRRS1	PRRS2	PRRS1+PRRS2
All eradications	207	99	71	37
Partial depopulation	159	82	53	24
Depop / repop	48	17	18	13
Success rate		89%	81%	

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Results
Partial PRRS eradications – success rate

	Total	PRRS1	PRRS2	PRRS1+PRRS2
All eradications	207	99	71	37
Partial depopulation	159	82	53	24
Depop / repop	48	17	18	13
Success rate		89%	81%	58%

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Results
Partial PRRS eradications – success rate

	Total	PRRS1	PRRS2	PRRS1+PRRS2
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Partial depopulation	159	82	53	24
Depop / repop	48	17	18	13
Success rate	82%	89%	81%	58%

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Results – follow-up
Re-infections on negative farms

- 9% (16/173) re-infections during the study period
  - Median time to re-infection of 344 days (132 - 1,241 days)

Slightly higher incidence on study farms,
compared with Danish sow farms (6%)

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Results

Antimicrobials prescribed before and after a PRRS eradication

Total amount of AMU prescribed	2,34 [0,03:10,72] (n= 161)[5]	2,15 [0,04:10,34] (n= 148)[6]
10 – Reproduction	0,48 [0:1,55] (n = 120)	0,40* [0,01:1,23] (n= 120)
11 – Udder	0,49 [0:1,34] (n= 68)	0,36 [0,01:1,67] (n= 68)
12 – Gastrointestinal disorders	0,17 [0:6,61] (n= 139)	0,13* [0:1,32] (n= 128)
13 – Respiratory disorders	0,34 [0:8,48] (n= 110)	0,38 [0,01:3,73] (n= 113)
14 – Joints, limbs, hoofs, CNS, skin	1,12 [0,01:2,92] (n= 161)	0,99* [0:2,72] (n= 159)
15 - Metabolic and circulatory disorders	0,02 [0,01:1] (n= 5)	0,12 [0:0,3] (n= 9)

Significant reduction in antimicrobials prescribed for sows on PRRS eradicated farms

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Conclusion

- Increase in the number of PRRS eradications on sow farms after the introduction of the PRRS control programme
- 82% success rate in Danish sow farms performing a partial PRRS depopulation
- Slightly higher incidence of PRRS on farms which had completed a successful PRRS eradication compared with Danish sow farms in general
- Reduced amount of antimicrobials prescribed in sow farms completing a PRRS eradication

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PRRS ERADICATION STRATEGIES OF SOW HERDS USED BY DANISH PRACTITIONERS

M. Fisker Kristensen[1], M. Fertner[2], N. Weber[1], A. Boklund[3]

Background

The Danish national reduction plan for Porcine Reproductive and Respiratory Syndrome (PRRS) was launched in Denmark in May 2022. The plan aims to reduce PRRS through regional efforts, focusing on the eradication of PRRS in selected areas.

The primary objective of this study was to investigate the considerations made by practitioners before and during a PRRS eradication program of a sow herd.

Material and Methods

The study involved a survey conducted among 24 swine veterinarians (participation rate 86%) who had advised on PRRS eradication of sow herds from January 2023 to March 2024. All veterinarians were interviewed by telephone through a structured questionnaire dealing with considerations to account for before and during a PRRS eradication, as well as methods applied for monitoring PRRS.

Danish guidelines - partial PRRS eradication of sow herds

- LCH method (load-close-homogenize)
- Herd closure for 210 days
- Mass vaccination with MLV vaccine – NO LVI in Denmark
- McRebel-procedures in farrowing unit
- Surveillance with PCR (testicles, tongues, oral fluid, etc.)

Results

The survey revealed that veterinarians largely followed current Danish recommendations for PRRS eradication, with adjustments tailored to individual herds. The most common considerations before starting an eradication program included the geographical location of the herd, previous PRRS infection routes, and whether to perform partial eradication or total depopre-pop. The Load-Close-Homogenize (LCH) method was predominantly recommended for partial eradication, with most veterinarians advising the use of live modified vaccines. All veterinarians used McRebel guidelines for infection control, and the majority recommended emptying nursery barns in integrated herds during partial eradication.

The most common reason for a failed PRRS eradication, according to the veterinarians, was that the herd personnel did not comply with internal biosecurity

Conclusion

This study conclude that veterinarians' recommendations align with current Danish guidelines for partial eradication of sow herds. However, eradication programs are always adapted to the specific herd due to significant variations in herd structure. According to the interviewed veterinarians, the most frequently cited reason for failed PRRS eradication was non-compliance with infection control measures.

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Version 1.0 - 2023

Overvågning ved sanering for PRRS i sohold