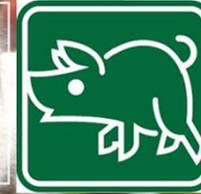




LUDWIG-  
MAXIMILIANS-  
UNIVERSITÄT  
MÜNCHEN

TIERÄRZTLICHE FAKULTÄT  
ZENTRUM FÜR KLINISCHE TIERMEDIZIN  
**KLINIK FÜR SCHWEINE**



# Übersicht aus den aktuellen Arbeiten von den internationalen Schweinekongressen

M. Ritzmann  
Klinik für Schweine  
Ludwig-Maximilians-Universität München

# relevante Kongresse 2024

## Proceedings of the 55<sup>th</sup> AASV Annual Meeting

February 24-27, 2024  
Nashville, Tennessee



27<sup>th</sup> International Pig  
Veterinary Society Congress

15<sup>th</sup> European Symposium of  
Porcine Health Management



[www.ipvs2024.com](http://www.ipvs2024.com)



# relevante Kongresse 2024

- 207 Vorträge  
(inkl. Postervorstellung)
- 798 Poster
- Themenblöcke Vorträge:

## ORAL PRESENTATIONS

Virology and Viral Diseases (VVD-OP-01 / VVD-OP-13)  
One Health: Veterinary Public Health and Sustainable Pig Production  
Reproduction (REP-OP-01 / REP-OP-13)  
Resident Session (RES-OP-01 / RES-OP-05)  
Parasitology and Parasitic Diseases (PAR-OP-01 / PAR-OP-04)  
Clinical Club (OCC-OP-01 / OCC-OP-04)  
Bacteriology and Bacterial Diseases (BBD-OP-01 / BBD-OP-13)  
Herd Health Management (HHM-OP-01 / HHM-OP-13)  
Nutrition (NUTR-OP-01 / NUTR-OP-13)  
Immunology and Vaccinology (IMM-OP-01 / IMM-OP-09)  
Animal Welfare and Ethology (WEL-OP-01 / WEL-OP-05)  
Precision Livestock Farming (PLF-OP-01 / PLF-OP-05)

27<sup>th</sup> International Pig  
Veterinary Society Congress

15<sup>th</sup> European Symposium of  
Porcine Health Management



**IPVS & ESPHM**

JUNE 4-7, 2024 LEIPZIG, GERMANY

[www.ipvs2024.com](http://www.ipvs2024.com)



# relevante Kongresse 2024

**Proceedings of the 55<sup>th</sup>  
AASV Annual Meeting**

February 24-27, 2024  
Nashville, Tennessee



*Leading  
AASV*

*into the  
Future*

AMERICAN ASSOCIATION  
SWINE VETERINARIANS

[aasv.org/annmtg](https://aasv.org/annmtg)

\* Photo courtesy of the National Pork Board, Des Moines, Iowa, USA

- 109 Vorträge
  - davon 49 Industrievorträge
- 58 Poster
  - davon 17 Industrieposter
- zusätzlich 10 Seminare

# relevante Kongresse 2024

**Proceedings of the 55<sup>th</sup>  
AASV Annual Meeting**

February 24-27, 2024  
Nashville, Tennessee

*Leading  
AASV*

*into the  
Future*



[aasv.org/annmtg](http://aasv.org/annmtg)

\* Photo courtesy of the National Pork Board, Des Moines, Iowa, USA

The graphic features a central blue hexagonal shape with the text 'Leading AASV' and 'into the Future'. Surrounding this are several smaller images: a pig's face, two people in a lab, a person using a laptop, a person on a phone, and a pig in a field.

- Schwerpunkt Erreger:

- PRRSV

- Lawsonien

- Mycoplasmen

- Schwerpunkt Themen:

- Biosicherheit

- Elimination

- Impfstoffe

- „globale Sicht“

# Globaler Handel

- Steigerung der Exporte aus den USA und aus Brasilien
- Reduktion der Exporte aus der EU

<https://doi.org/10.54846/am2024/163>

**The international consumer is key to the future of the US pork industry**

Erin Borrer  
US Meat Export Federation

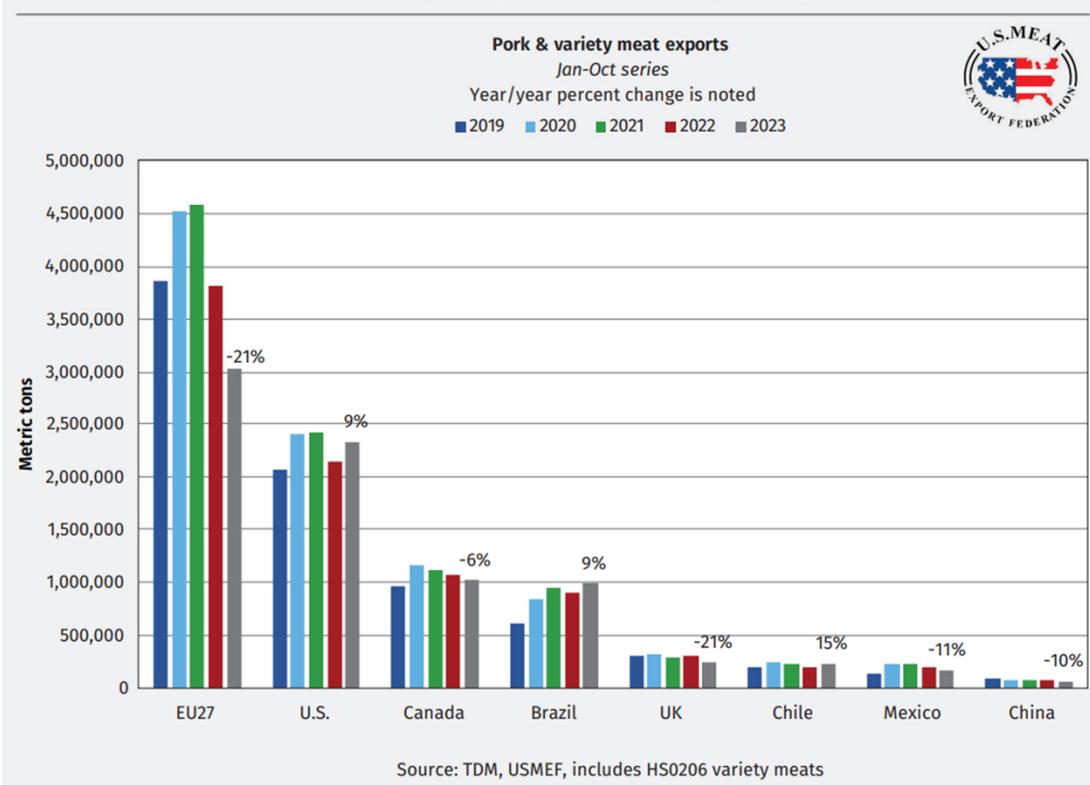
<https://doi.org/10.54846/am2024/164>

**Driving demand: What the Pork Checkoff is doing with your money. What you need to do.**

Bill Even  
CEO, National Pork Board

**Expanding international market development with the US meat export federation (USMEF)**

**Figure 5: Global pork exports down 7% in Jan-Oct, totaling 8.075 million metric tons, but strong 9% rebound in US exports.**



# Globaler Handel

- Hauptimporteur ist China

Protecting the product: How I work with my packer

<https://doi.org/10.54846/am2024/166>

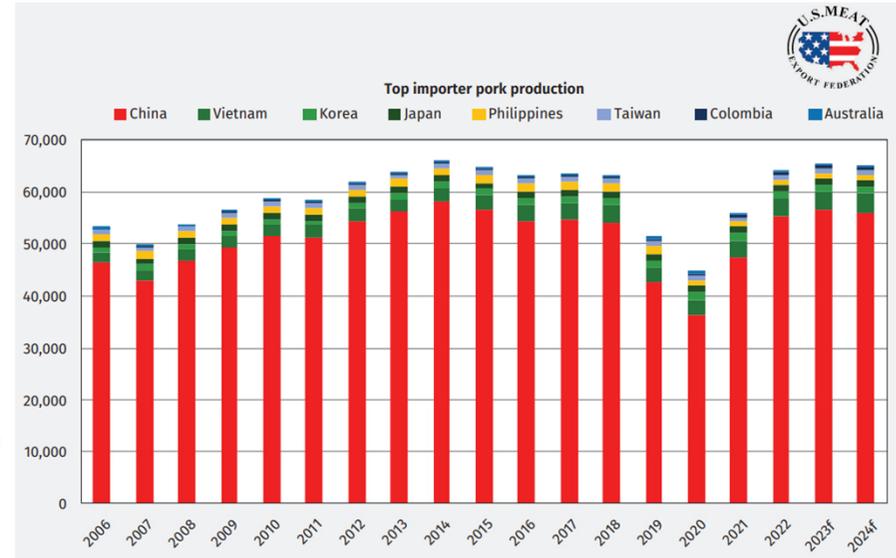
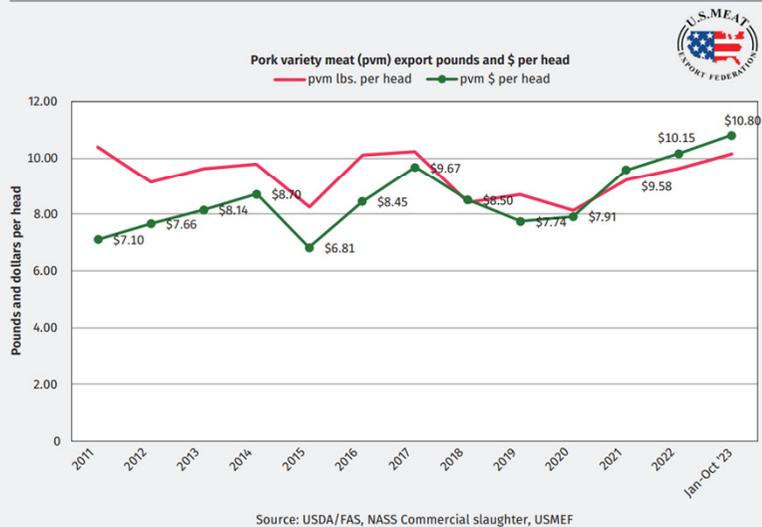
D. Murray, DVM  
New Fashion Pork, Jackson, Minnesota

Protecting the product: Are your clients participating in price protection?

<https://doi.org/10.54846/am2024/165>

D. Baker

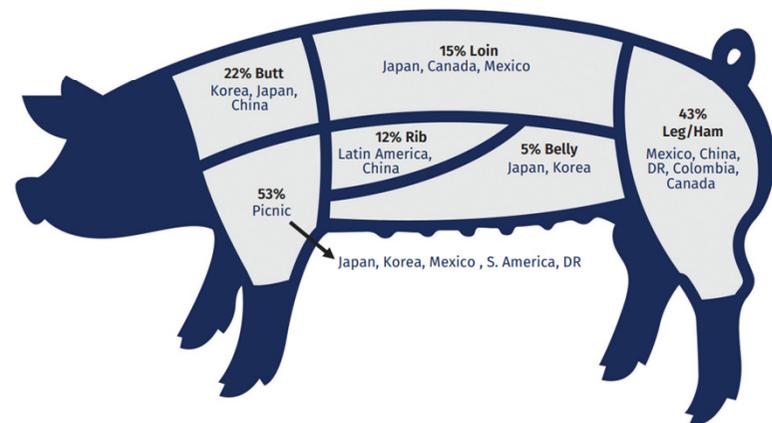
Figure 3: Pork variety meat exports are on a record pace.



2023 Jan-Oct:

- 39.36 lbs. per head exported, 25% of production
- At average of \$52 per head
- Pork/pvm export averaged \$62.79/head, which was 36% of the hog value of \$172.58 and 33% of the per head cutout value of \$191.54

Source: USMEF calculations using NASS Commercial hog slaughter, AMS hog and pork cutout values, FAS export data



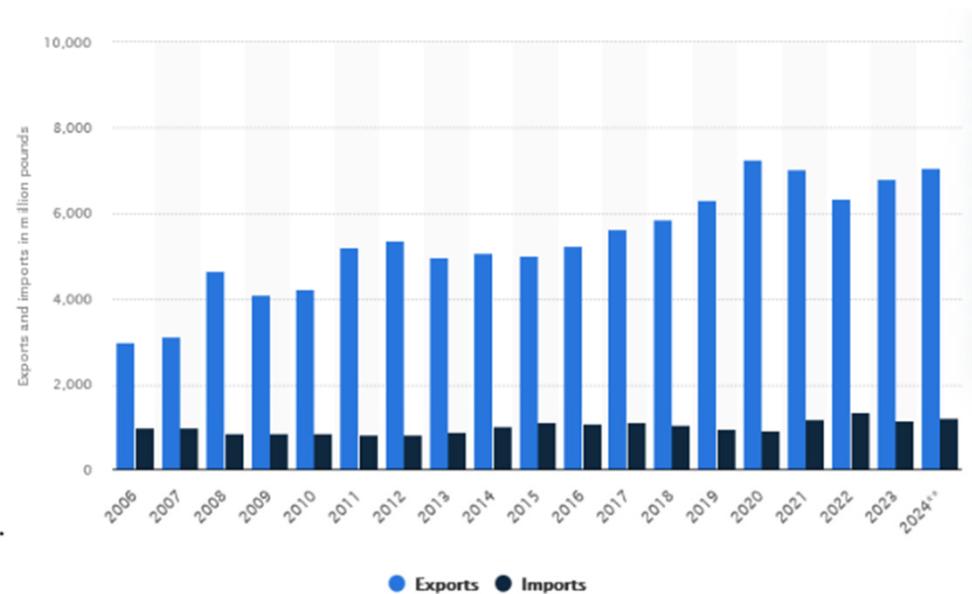
Source: USMEF 2022 estimates for export volume as a share of total U.S. pork primal production

# Globaler Handel – Produktion in den USA

- Produktion in USA:
- 30% Export
- 70% nationaler Markt

## Increasing volume and value of US pork domestically

Approximately 70% of total US pork stays in the domestic market.



<https://doi.org/10.54846/am2024/167>

## Protecting the product: A swine vet's job isn't done when the pig is loaded on the truck

Grace E. Houston, DVM, PhD  
Triumph Foods LLC, Saint Joseph, Missouri

## Protecting demand for US pork by preventing animal diseases

# Produktion in den USA

- Relevanz und Zukunft der tierärztlichen Betreuung

## Alex Hogg Memorial Lecture

<https://doi.org/10.54846/am2024/1>

**Next Generation Swine Veterinarians: Who are we and where are we going?**

Joel Nerem, DVM  
Pipestone Veterinary Services, Pipestone, Minnesota

**Past, present, and future challenges for the swine veterinary profession**

**Tools of the future for veterinary practitioners**

Chris J. Rademacher, DVM

# Produktion in den USA

## - Relevanz und Zukunft der tierärztlichen Betreuung

### Welfare

Like health, pig welfare fits squarely in the wheelhouse of the swine vet.<sup>6</sup> We should be the champions of swine well-being. We took an oath. It should be our passion. And while improving pig health is the single biggest way we can improve pig welfare, there are other priorities we should focus on. Some thoughts on swine welfare include:

- **Improving animal welfare should improve pig performance.** Therefore, we should embrace the topic and continually seek to improve it.
- **The public (our customers) view animal welfare as a high priority.** They even approve ballot initiatives that they think improve pig welfare, even when they do not. While some of these initiatives may be misguided, veterinarians have the responsibility (and opportunity) to ensure that the pig's welfare is improved as new requirements and production practices are applied.
- **Never walk past an issue.** Always embrace it as a teaching opportunity for caregivers and a way to make a pig's life better.
- **Who are your swine welfare experts?** Are you collaborating with them? Are we innovating in this space? I have had the privilege to work with several champions of swine welfare in my career: Dr. Angela Baysinger, Dr. Carissa Odland, and Dr. Cara Haden. Who is on your animal welfare expert panel list? How are they helping to improve animal welfare on your farms?

## Focus on the pig

### Health

Improving health is the greatest impact veterinarians can have on the pig (and the farmer's farm). It is at the center of our wheelhouse. If we are not focusing on health, we should probably not call ourselves veterinarians. By improving the health of pigs, we have a tremendous impact on animal well-being and the farm's profitability. Health should be our number one priority. Improving it is the right thing to do. While developing disease prevention and elimination strategies, vaccination schedules, diagnosing disease, and prescribing appropriate treatments are all critically important, to take the US swine herd's health to the next level, we need to do some things differently:

1. **Better understand the cost of disease**
2. **Implement Next Generation Biosecurity**
3. **Better farm and production system design**
4. **Disease elimination**

# Biosicherheit

## USA:

- auch in USA heterogene Betriebsstrukturen
- Fokus der Früherkennung und Biosicherheitsmaßnahmen auf PRRS

## A mixed method study of beliefs, behaviors and practices of farm biosecurity in the US swine industry

M. C. Chepkwony<sup>1</sup>, DVM, MVPH; D. N. Makau<sup>2</sup>, DVM, MVEE, PhD; C. Yoder<sup>1,2</sup>, DVM, MS; M. Culhane<sup>2</sup>, DVM, PhD; M. S. P. Aguirreburualde<sup>1</sup>, DVM, PhD; A. M. Perez<sup>1</sup>, DVM, PhD; C. A. Corzo<sup>2</sup>, DVM, MS, PhD; Michael Mahero<sup>1,3</sup>, DVM, MPH, PhD  
<sup>1</sup>Center for Animal Health and Food Safety, University of Minnesota; <sup>2</sup>Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, Minnesota; <sup>3</sup>Department of Biomedical and Diagnostic Sciences, College of Veterinary Medicine, University of Tennessee Institute of Agriculture, Knoxville, Tennessee

## Characterization of farming, management, biosecurity, and marketing practices of alternative pig farms in Minnesota

M. B. Medrano, DVM, MPH; M. R. Culhane, DVM, PhD; C. A. Corzo, DVM, MS, PhD  
Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, Saint Paul, Minnesota

## Development and implementation of an early warning tool for disease occurrence in the US swine breeding herd population

X. Yue, PhD; M. Kikuti, PhD; C. M. Mellini, DVM; C. A. Corzo, DVM, PhD  
Dept. of Veterinary Population Medicine, University of Minnesota, Saint Paul, Minnesota

<https://doi.org/10.54846/am2024/143>

## The Zombie Apocalypse approach to biosecurity, biocontainment, and disease control and elimination

Luc Dufresne, DVM

# Biosicherheit

## MAPPING BIOSECURITY LEGISLATION IN THE INTENSIVE PIG PRODUCTION ACROSS EUROPE

### Europa:

E. Biebaut<sup>1</sup>, M. Stukelj<sup>2</sup>, T. Pina Nunes<sup>3</sup>, V. Nedosekov<sup>4</sup>, C. Correia Gomes<sup>5</sup>, B. Mehmedi<sup>6</sup>, I. Corrége<sup>7</sup>, L. ózsvári<sup>8</sup>, L. Svennesen<sup>9</sup>, E. Bernaerdt<sup>10</sup>, I. Toppari<sup>11</sup>, L. Gresakova<sup>12</sup>, C. Romanelli<sup>13</sup>, M.E. Filippitzi<sup>14</sup>, M. Siv<sup>15</sup>, B. Angjelovski<sup>16</sup>, S. Küker<sup>17</sup>, A. Allepuz<sup>18</sup>, A. Viltrop<sup>19</sup>, M. Didara<sup>20</sup>, M. Nikolic<sup>21</sup>, E. Vink<sup>22</sup>, I. Chantziaras<sup>1</sup>, L. Dahlin<sup>24</sup>, M. De Nardi<sup>25</sup>, T. Nicolaisen<sup>23</sup>, J. Prodanov-Radulovic<sup>26</sup>

- große Unterschiede zwischen den Ländern
- Fokus eher externe Biosicherheit als interne Biosicherheit

## WHAT ARE THE EXTERNAL BIOSECURITY MEASURES IN FRENCH OUTDOOR PIG FARMS?

### Frankreich:

M. Delsart<sup>1</sup>, N. Rose<sup>2</sup>, B. Dufour<sup>1</sup>, E. Boudin<sup>2</sup>, V. Dorenlor<sup>2</sup>, F. Eono<sup>2</sup>, E. Eveno<sup>2</sup>, S. Kerphérique<sup>2</sup>, G. Poulain<sup>2</sup>, M. Souquière<sup>2</sup>, F. Pól<sup>3</sup>, C. Fablet<sup>2</sup>

<sup>1</sup>Anses, École Nationale Vétérinaire d'Alfort, Laboratoire de Santé Animale USC EPIMAI, 94700 Maisons-Alfort, France

<sup>2</sup>Anses Ploufragan-Plouzané-Niort, Unité Épidémiologie, Santé et Bien-Être, 22440 Ploufragan, France

<sup>3</sup>ONIRIS, 101 Rte de Gachet, 44300 Nantes, France

- 59% der Freilandbetriebe erfüllen nicht die gesetzlichen Grundlagen

## BIOSECURITY IN PIG FARMS OVER TIME IN IRELAND

### Irland:

C. Correia-Gomes<sup>1</sup>

<sup>1</sup>Animal Health Ireland, 2–5 The Archways, Carrick on Shannon, Co. Leitrim, Ireland N41 WN27

- Verbesserungen seit 2018 erkennbar

# Biosicherheit

## ASSESSMENT OF CLEANING AND DISINFECTION PRACTICES ON PIG FARMS ACROSS TEN EUROPEAN COUNTRIES

I. Makovska<sup>1</sup>, I. Chantziaras<sup>1</sup>, N. Caekebeke<sup>2</sup>, P. Dhaka<sup>3</sup>, J. Dewulf<sup>1</sup>

<sup>1</sup>*Veterinary Epidemiology Unit, Department of Internal medicine, Reproduction and Population medicine, Faculty of Veterinary Medicine, Ghent University, Salisburyaan 133,9820 Merelbeke, Belgium*

<sup>2</sup>*Biocheck.Gent BV, Belgium*

<sup>3</sup>*Centre for One Health, College of Veterinary Science, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana 141004, India*

### Europa:

- Biocheck.UGent

(<https://biocheckgent.com>)

- Auswertung von 14.236 Betrieben in 10 EU Ländern

- 65% führen „ordnungsgemäße“ R+D durch

## EFFECTIVENESS OF CLEANING AND DISINFECTION PROTOCOLS ON PIG FARMS IN NORTHERN-BELGIUM.

T. Vandersmissen<sup>1</sup>, C. Bonckaert<sup>1</sup>, C. Brossé<sup>1</sup>, C. Rigauts<sup>1</sup>

<sup>1</sup>*DGZ Vlaanderen, Hagenbroeksesteenweg 167, 2500 Lier, Belgium*

### Belgien:

- Defizite in R+D insb. in Abferkelabteilen

# Elimination

**national erfolgreiche**

**Eradikationen:**

- KSP
- Aujeszky'sche Krankheit

**global/national bislang kaum**

**erfolgreich:**

- PED
- PRRSV
- M. hyopneumoniae (außer Schweiz)
- **ASP**

<https://doi.org/10.54846/am2024/140>

**Eradication of classical swine fever and pseudorabies viruses in the United States ... what worked and why?**

Jeff Zimmerman, DVM, PhD

Department of Veterinary Diagnostic and Production Animal Medicine, Iowa State University, Ames, Iowa

## Reasons for success?

CSFV and PRV eradication were successful because of:

1. Strong, long-term industry support and an effective Federal-State-Industry collaboration.
2. A substantial scientific understanding of the natural histories of CSFV and PRV.
3. The availability of diagnostically sensitive and diagnostically specific tests. In the case of PRV, the crucial role of highly effective DIVA vaccines and antibody ELISAs cannot be exaggerated.
4. Willingness to apply new concepts. Representative sampling was accepted and integrated into the PRV program and the "whole herd" sampling used in the CSFV program abandoned as impractical and unnecessary.

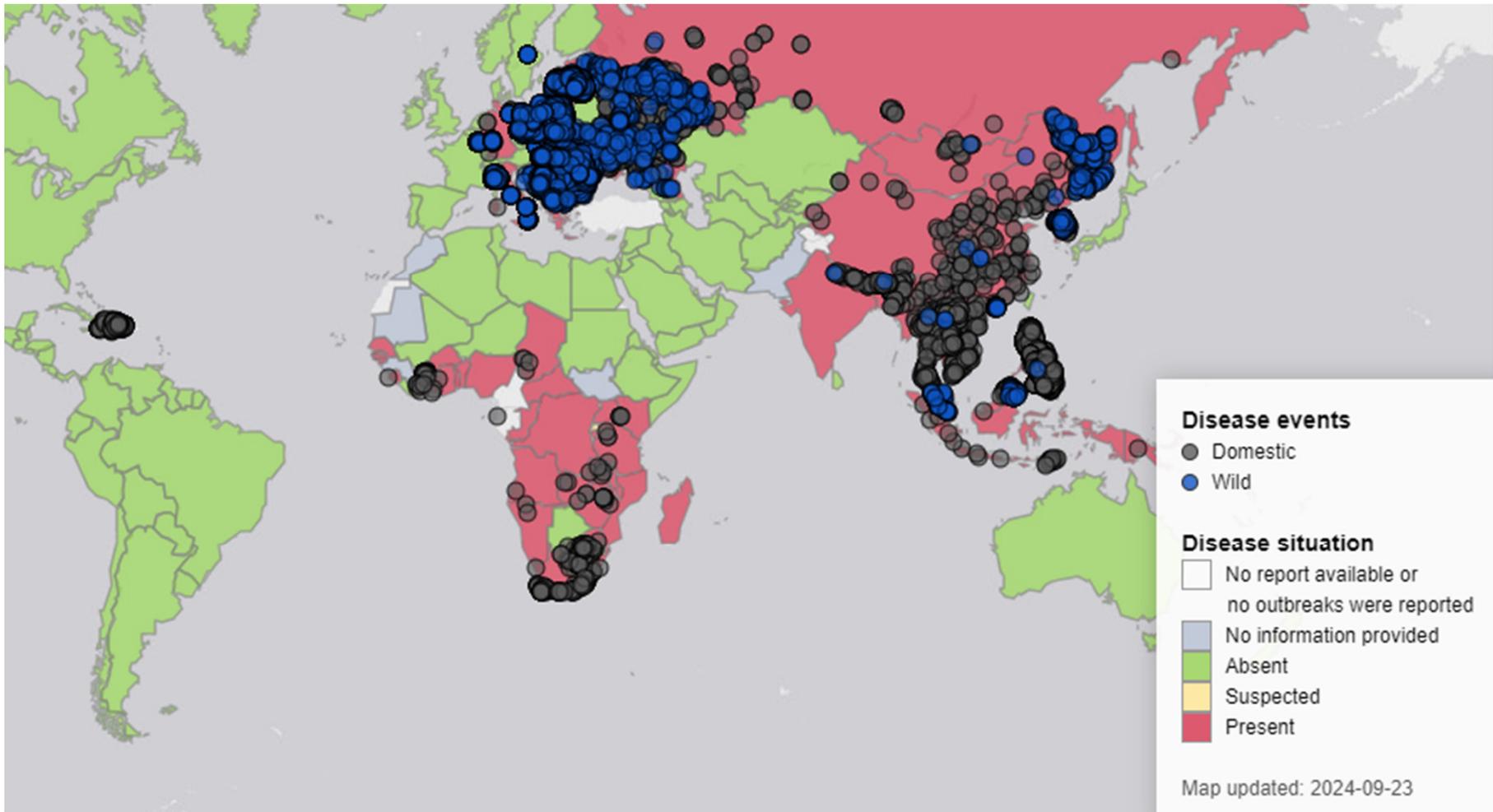
<https://doi.org/10.54846/am2024/145>

**Pseudorabies virus elimination versus porcine epidemic diarrhea virus elimination: We did it before, why not do it again?**

L. Tokach, DVM, DAVBP; M. Potter, DVM, PhD  
Abilene Animal Hospital, Pennsylvania, Abilene, Kansas

# ASP

Ausbrüche seit 2018:



EFSA, 23.09.24

# ASP

## Eintragsquellen:

- Personen
- Offenstallungen
- Speiseabfälle
- Fahrzeuge/Tiere
- in Asien Fliegen?

### MANAGEMENT AFTER ASF OUTBREAK IN A FINISHER FARM: A REAL STORY

P. Poolperm<sup>1</sup>, N. Phetphloy<sup>2</sup>

<sup>1</sup>Professional Training and Consultant, Co.LTD., Thailand

<sup>2</sup>Porq Co.,LTD. Bangkok, Thailand

### ASSESSMENT OF RISK FACTORS FOR SPREADING OF AFRICAN SWINE FEVER IN BACKYARD PIG HOLDINGS IN THE BELGRADE CITY AREA

B. Kureljušić<sup>1</sup>, B. Savić<sup>1</sup>, B. Milovanović<sup>1</sup>, N. Jezdimirović<sup>1</sup>, D. Glišić<sup>2</sup>, J. Prodanov Radulović<sup>3</sup>, V. Milićević<sup>1</sup>

<sup>1</sup>Scientific Institute of Veterinary Medicine of Serbia, Belgrade, Serbia

<sup>2</sup>Institute of Veterinary Medicine of Serbia, Janisa Janulisa 14, 11000 Belgrade, Serbia

<sup>3</sup>Scientific Veterinary Institute "Novi Sad", Serbia

### AFRICAN SWINE FEVER: SUCCESSFUL KEYS TOWARDS ASF PREVENTION AND CONTROL

A. Boonsoongnern<sup>1</sup>, P. Boonsoongnern<sup>1</sup>, Y. Woonwong<sup>1</sup>, N. Thanantong<sup>1</sup>, T. Kaminsonsakul<sup>1</sup>, S. Phuttapatimok<sup>1</sup>, N. Rattanavanichrojn<sup>1</sup>, P. Poolperm<sup>1</sup>, P. Jirawattanapong<sup>1</sup>

<sup>1</sup>Faculty of Veterinary Medicine, Kasetsart University, Bangkok, Thailand, 10900

### RISK FACTORS ASSOCIATED WITH SPREAD OF AFRICAN SWINE FEVER VIRUS IN SMALL- AND MEDIUM-SCALE FARMS IN THE WESTERN REGION OF THAILAND

N. Am-In<sup>1</sup>, P. Photiphat<sup>2</sup>, S. Malicharn<sup>2</sup>, T. Bangkeaw<sup>2</sup>, B. Sorrasittsuksakul<sup>2</sup>, S. Nuanualsuwan<sup>3</sup>, D. Nilubol<sup>4</sup>

<sup>1</sup>Center of Excellence in Swine Reproduction, Department of Obstetrics, Gynaecology and Reproduction, Faculty of Veterinary Science, Chulalongkorn University, Thailand

<sup>2</sup>Ratchaburi Provincial Livestock Office, Ratchaburi, Thailand

<sup>3</sup>Center of Excellence for Food and Water Risk Analysis (FAWRA), Department of Veterinary Public Health, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand

<sup>4</sup>Swine Viral Evolution and Vaccine Development Research Unit, Department of Veterinary Microbiology, Faculty of Veterinary Science, Chulalongkorn University, Thailand

## ASP-Risikoampel ASF PREVENTION: WEB-BASED TOOL TO ASSESS RISK FOR ASF INTRODUCTION IN PIG FARMS WITH OUTDOOR HOUSING

B. Grabkowsky<sup>1</sup>, M. Gellermann<sup>1</sup>, F.J. Conraths<sup>2</sup>, N. Denzin<sup>2</sup>, C. Sauter-Louis<sup>2</sup>, M. Martin<sup>3</sup>

<sup>1</sup>Center of sustainability transformation in areas of intensive agriculture | University of Vechta, Germany

<sup>2</sup>Friedrich-Loeffler-Institut, Greifswald - Insel Riems, Germany

<sup>3</sup>Comissioner for Animal Welfare, Ministry for the Environment, Climate, Agriculture and Consumer Protection Hesse, Wiesbaden, Germany

# ASP

## ASSESSMENT OF VIREMIA, ANTIBODY RESPONSE, SURVIVAL RATES, SHEDDING TO SENTINELS AND PERSISTENT INFECTION OF PIGS FOLLOWING NATURAL FIELD AFRICAN SWINE FEVER VIRUS EXPOSURE

### Asien:

D. Venkateswaran <sup>1</sup>, S. Muhammad <sup>1</sup>, R. Suntisukwattana <sup>1</sup>, W. Atthaapa <sup>1</sup>, P. Jermutjarit <sup>1</sup>, P. Watcharavongtip <sup>1</sup>, D. Nilubol <sup>1</sup>

<sup>1</sup>*Department of Veterinary Microbiology, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand*

- persistente Infektionen nachgewiesen (mind. 19 Wochen p.i.)

## FACING THE CHALLENGES OF ENDEMIC AFRICAN SWINE FEVER IN VIETNAM

### Vietnam:

C.D. Lai <sup>1</sup>, T.N.T. Ngo <sup>2</sup>, T.D. Do <sup>2</sup>

<sup>1</sup>*Nebraska Center for Virology, University of Nebraska-Lincoln, Lincoln, NE 68583, USA*

<sup>2</sup>*Faculty of Animal Science and Veterinary Medicine, Nong Lam University, HCMC, Thu Duc city, Ho Chi Minh city, Vietnam*

- endemische Regionen
- teilweise „andere“ klinische Anzeichen: Mastitis, Arthritis

## SURVEILLANCE FOR DETECTION OF ASFV IN PIG FARM: INVASIVE VERSUS NON-INVASIVE SAMPLING

### Diagnostik:

S. Hong <sup>1</sup>, K. Cho <sup>1</sup>, H. Kang <sup>1</sup>, Y. Kim <sup>1</sup>

<sup>1</sup>*Foreign animal disease division, Animal and Plant Quarantine Agency, South Korea*

- Umgebungsproben für Diagnostik/Überwachung kaum geeignet
- Lymphknotenbiopate gut geeignet

# ASP

Keynote lectures  
**PROF. HUA-JI QIU**

Session: Virology and viral diseases  
Lecture: **New technologies applied to vaccine development:  
what can we expect?**

## Impfstoffe in Asien:

- Lebend-Impfstoff gegen ASP im Juni 2022 in Vietnam zugelassen
- zunächst ungeklärte Todesfälle nach der Impfung
- Impfstoff im August 2022 zurückgezogen
- Impfstoff seit Oktober 2022 in Vietnam wieder zugelassen
  
- bis Anfang September 2024 insgesamt 2,6 Millionen Schweine geimpft
- Vakzination auch auf den Philippinen

### GENERATION AND EVALUATION OF CELL-ADAPTED VACCINE CANDIDATE AGAINST AFRICAN SWINE FEVER VIRUS

H. Kwon <sup>1</sup>, M. Kim <sup>1</sup>, J. Cha <sup>2</sup>, Y. Kim <sup>3</sup>, J.Y. Lee <sup>1</sup>, I. Yoon <sup>1</sup>, W. Jeong <sup>3</sup>, I. Mo <sup>4</sup>, S. Yoo <sup>1</sup>, L. Jong-Soo <sup>2</sup>

<sup>1</sup>ChoongAng Vaccine Laboratories Co., Ltd, Daejeon, 34055, Republic of Korea

<sup>2</sup>College of Veterinary Medicine, Chungnam National University, Daejeon, Republic of Korea

<sup>3</sup>National Wildlife Disease Control Institute, Gwangju, 58131, Republic of Korea

<sup>4</sup>Avinext, Cheongju, 28382, Republic of Korea



Trade name: **NAVET-ASFVAC**  
❖ ASFV-G-ΔI177L Strain  
❖ Cell line: PBMC  
❖ Virus titer  $\geq 10^{2.6}$ HAD<sub>50</sub>/dose  
❖ Animals: Pig 8 weeks of age



Trade name: **AVAC ASF Live**  
❖ ASFV-G-ΔMGF Strain  
❖ Cell line: DMAC  
❖ Virus titer  $\geq 10^{3.5}$ HAD<sub>50</sub>/dose  
❖ Animals: Pig 4 weeks of age



Trade name: **DACOVAC ASF2**  
❖ ASFV-G-ΔI177L/ΔLVR Strain  
❖ Cell line: PIPEC  
❖ Virus titer  $\geq 10^{3.0}$ HAD<sub>50</sub>/dose  
❖ Animals: Pig 4 weeks of age

Long, 2023

# Elimination

**national erfolgreiche**

**Eradikationen:**

- KSP
- Aujeszky'sche Krankheit

**global/national bislang kaum  
erfolgreich:**

- PED
- PRRSV
- *M. hyopneumoniae*
- ASP

## 4. Disease elimination

We continue to live with swine diseases in the US that can be eliminated.<sup>1</sup> Occasionally we add some to the list. Rarely, do we ever remove one from the list. It's time to start getting rid of some:

- **Farm by farm:** Lots of pathogens can be eliminated at the sow farm without needing depopulation and repopulations. PRRS, *Mycoplasma hyopneumoniae*, and the enteric coronaviruses (PEDV, TGEV, etc) come to mind. If we are reluctant to eliminate these costly pathogens from breeding herds, then, likely, we haven't implemented the correct biosecurity to prevent reintroduction, or our farm is in the wrong location.
- **National disease elimination:** I don't think we are ready to eliminate PRRS nationally, but we do have the tools, strategies, and expertise to eliminate *Mycoplasma hyopneumoniae* and the enteric coronaviruses. What we lack is the will to do it. I think it is time to take some diseases off the national list and these are where I think we should start. We are starting to organize as an industry to see such bold goals possible. The US Swine Health Improvement Plan (SHIP) could be an avenue for this effort.

# Elimination

**national erfolgreiche**

**Eradikationen:**

- KSP
- Aujeszky'sche Krankheit

**global/national bislang kaum  
erfolgreich:**

- PED
- PRRSV
- *M. hyopneumoniae*
- ASP

## Area control programs

Individual herd elimination plans have been successful for extended periods of time, even in relatively pig dense areas. The addition of filtration to many herds has also reduced the likelihood of area spread to these herds. Herds that have started as negative or have been through depopulation and repopulation have also had good track records of remaining *M hyopneumoniae* negative. All these cases would lead to only seeing additional benefit in regional control with the remarkable success seen at the level of individual herds, extending these efforts to a regional scale could undoubtedly amplify their effectiveness. Such a strategic approach would not only diminish the incidence of new infections but, considering the identified sources, it also presents a relatively low risk in the present scenario. Regional elimination of *M hyopneumoniae* would reduce the level of new infections without a doubt.

To date, there has been limited activity and focus around *M hyopneumoniae* regional control programs. PRRS area control projects have lost momentum, even though it is still a good idea. The increased number of PRRS regional control failures has made it more difficult to keep these moving forward. I believe this has been a limitation for *M. hyopneumoniae* following the same path, however, I believe that the outcome could be much better based on individual farm experiences. Although it still occurs, area spread of *M hyopneumoniae* is less likely to happen compared to other pathogens, aiding to the success of regional programs and even at a national level.

# Elimination

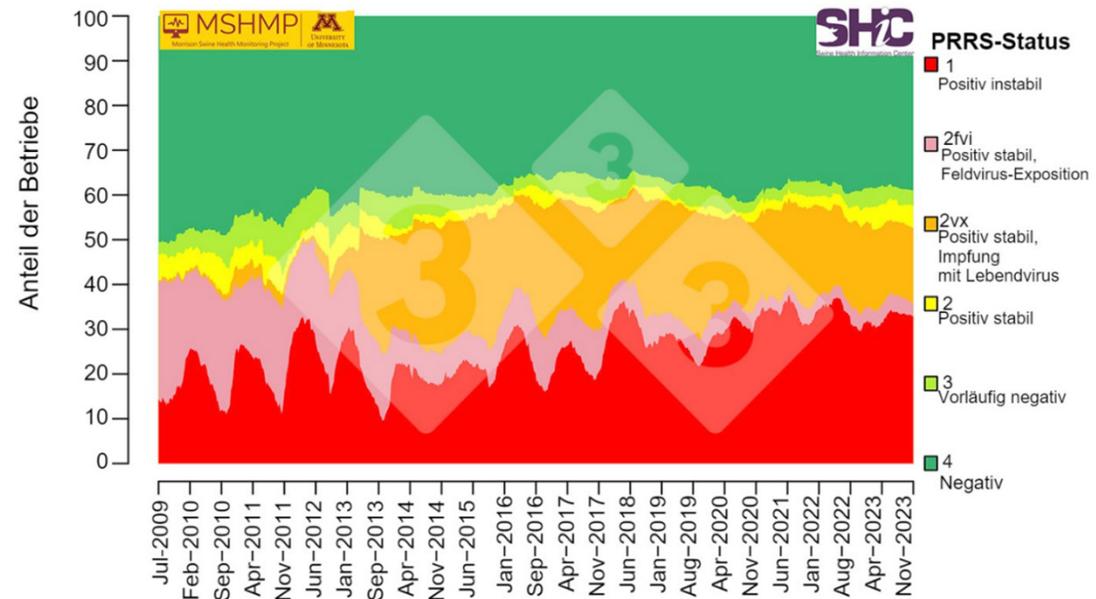
<https://doi.org/10.54846/am2024/142>

## PRRSV in USA:

- Fokus aktuell weniger auf Elimination als früher
- Schwerpunkt derzeit:
  - Vakzination
  - Biosicherheit
- langfristig:
  - genetische Resistenz
  - Elimination

## PRRSV: The NeverEnding Story

A. Maschhoff, DVM, T. Bauman, DVM  
The Maschhoffs, LLC, Carlyle Illinois



HOW MANY PRRS OUTBREAKS ARE THERE IN MY REGION? AN EARLY WARNING TOOL FOR DISEASE OCCURRENCE IN THE U.S. BREEDING HERDS

X. Yue<sup>1</sup>, M. Kikuti<sup>2</sup>, M. Melini<sup>1</sup>, C. Corzo<sup>2</sup>

<sup>1</sup>University of Minnesota

<sup>2</sup>Veterinary Population Medicine Department, College of Veterinary Medicine, University of Minnesota, St Paul, MN, USA

# Elimination



English

## PRRSV in Europa:

- einzelne Ansätze des Versuchs einer regionalen Elimination
- Fokus zunächst auf Statuserhebung

## Tendenz weniger Elimination, eher:

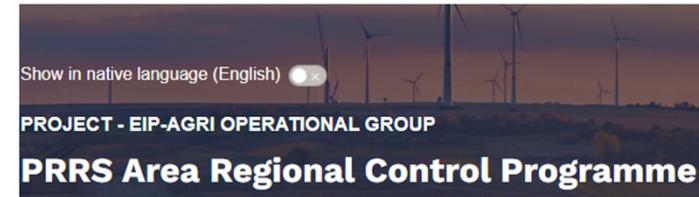
- verbesserte Biosicherheit
- koordinierte Vakzinationsprogramme
- Monitoring

### Objectives

The aim of this project is to control the spread of the pig disease, Porcine Reproductive and Respiratory Syndrome (PRRS), in the Cookstown Area through improved biosecurity, a coordinated vaccination programme and enhanced monitoring. PRRS is a viral disease of pigs characterised by two overlapping clinical presentations – reproductive impairment or failure in breeding animals, and respiratory disease in pigs of any age.



Home > EIP-AGRI Project Database > PRRS Area Regional Control Programme



PRRS Area Regional Control Programme

European Innovation Partnership (EIP)

**Author:** Dr Violet Wylie – violet.wylie@outlook.com  
**Operational Group:** Area Regional Control Group  
**Timescale of project:** 12<sup>th</sup> November 2020 - 30<sup>th</sup> June 2023  
**Date of final report:** 11<sup>th</sup> August



The European Agricultural Fund for Rural Development: Europe Investing in rural areas.



MAPPING THE GEOGRAPHICAL SPREAD OF PORCINE REPRODUCTIVE AND RESPIRATORY SYNDROME VIRUS (PRRSV) IN THE NETHERLANDS

K. Eenink<sup>1</sup>, H. Kreutzmann<sup>1</sup>, C. Vermeulen<sup>1</sup>, K. Koenders<sup>2</sup>, V. Manders<sup>2</sup>, M. Houben<sup>1</sup>  
<sup>1</sup>Royal GD, Deventer, The Netherlands  
<sup>2</sup>Linfeshof Veterinary Practice, Nederweert, The Netherlands

# Elimination

<https://doi.org/10.54846/am2024/147>

## PRRSV in Europa:

## Ungarn:

### PRRS eradication of pig herds in Hungary 2014 - 2022

I. Szabó<sup>1</sup>, DVM, PhD; I. Nemes<sup>1</sup>, DVM; L. Bognár<sup>2</sup>, DVM, PhD; T. Abonyi<sup>1</sup>, DVM, PhD; Zs. Terjék<sup>1</sup>, DVM; T. Molnár<sup>1</sup>, DVM; Á. Bálint<sup>3</sup> DVM, PhD

<sup>1</sup>National PRRS Eradication Committee, Budapest, Hungary; <sup>2</sup>Ministry of Agriculture, Budapest, Hungary; <sup>3</sup>Department of Virology, National Food Chain Safety Office Veterinary Diagnostic Directorate, Budapest, Hungary

#### - staatliches Bekämpfungsprogramm seit 2014

- a. **Backyard farms:** The authority ordered the **depopulation** of the herds with state compensation, but without the need for repopulation.
- b. **Large-scale fattening only units:** At this early stage of eradication, after pigs were transported to slaughter, the premises had to be thoroughly cleaned and disinfected and only PRRSV-free animals were allowed to be used for repopulation.
- c. **Large-scale breeding farms:** Complete freedom to decide whether eradication of the PRRS virus was to be carried out by complete **depopulation-repopulation**, or other methods (herd closure, test and removal, etc). The goal was to find an optimal eradication method tailored to every farm according to their technology, production system and management.

- zu Beginn bereits niedrige Prävalenz (4%)

bei Kleinbetrieben

- „nur“ 470 große Betriebe (Prävalenz 27%)

**Table 1:** The result of laboratory tests for PRRS carried out in backyard farms

| Year | Number of investigated animals | Number of seropositive animals | % of positive/ investigated animals |
|------|--------------------------------|--------------------------------|-------------------------------------|
| 2012 | 35253                          | 1650                           | 4.68%                               |
| 2013 | 34761                          | 1271                           | 3.66%                               |
| 2014 | 42885                          | 1956                           | 4.56%                               |
| 2015 | 31744                          | 1082                           | 3.41%                               |
| 2016 | 13521                          | 139                            | 1.03%                               |
| 2017 | 15582                          | 150                            | 0.96%                               |
| 2018 | 13111                          | 147                            | 1.12%                               |
| 2019 | 12680                          | 181                            | 1.43%                               |
| 2020 | 12264                          | 78                             | 0.64%                               |
| 2021 | 9907                           | 15                             | 0.15%                               |
| 2022 | 8606                           | 18                             | 0.21%                               |

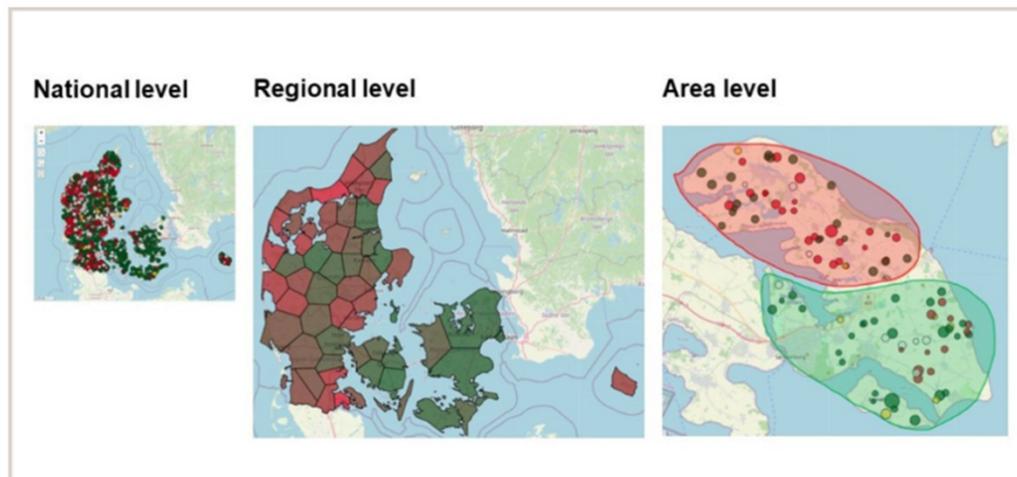
# Elimination

## National PRRS reduction programme in Denmark

PRRSV in Europa:

Dänemark:

♥ Food Supply & Safety, Health & Biosecurity



*Illustration of the administrative levels in the PRRS strategy. By Danish Agriculture & Food Council.*

- insgesamt 4.425 Betriebe in 43 Regionen
- 16 regionale Eradikationsprogramme

danbred, 2023, Weber, 2023, Weber et al., 2024, Fertner, 2024



January 2019



July 2019

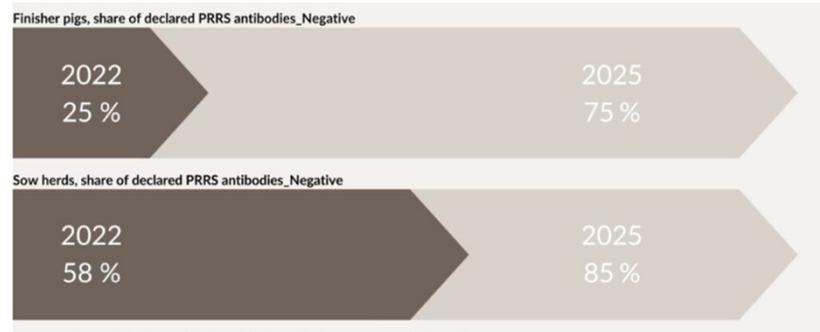
Kusk et al., 2020

# Elimination

## PRRSV in Europa:

## Dänemark:

Figure 2: The goals for Denmark's national strategy



### FIRST EXPERIENCES OF THE DANISH PRRS REDUCTION STRATEGY

N. Weber <sup>1</sup>, B. Lorenzen <sup>1</sup>, K. Møller <sup>1</sup>

<sup>1</sup>Danish Agriculture & Food Council

### ONLINE MAP OF PRRS PREVALENCE IN DENMARK – AN INVALUABLE TOOL IN THE NATIONAL REDUCTION STRATEGY

M. Fertner <sup>2</sup>, O. Helverskov <sup>1</sup>, S. Kjærgaard Boldsen <sup>2</sup>, B. Lorenzen <sup>3</sup>, N. Rosager Weber <sup>3</sup>

<sup>1</sup>SEGES Innovation P/S, Digital, Agro Food Park 15, DK-8200 Aarhus, Denmark

<sup>2</sup>SEGES Innovation P/S, Datamanagement, Agro Food Park 15, DK-8200 Aarhus, Denmark

<sup>3</sup>Danish Agriculture and Food Council, Axeltorv 3, Copenhagen, Denmark

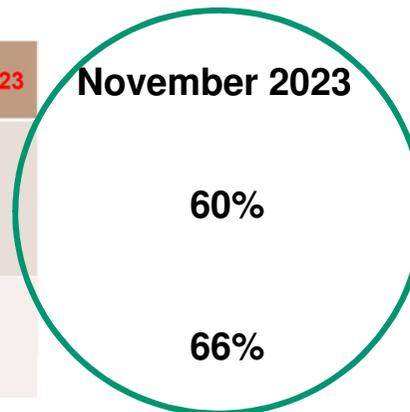
### GIS BASED RISKS OF INTRODUCTION OF PRRS, MYCOPLASMA HYOPNEUMONIAE AND ACTINOBACILLUS PLEUROPNEUMONIAE INTO DANISH PIG HERDS

J. Dahl <sup>1</sup>, B. Lorenzen <sup>2</sup>

<sup>1</sup>Danish Agriculture and Food Council, Axeltorv 3, Copenhagen, Denmark

<sup>2</sup>Danish Agriculture & Food Council, Aarhus, Denmark

|  | Starting point 2022 | Goals | January 2023 |
|--|---------------------|-------|--------------|
| Proportion of finishers declared seronegative for PRRSV at slaughter | 25%                 | 75%   | 46%          |
| Proportion of sow herds declared seronegative for PRRSV              | 58%                 | 85%   | 58%          |



danbred, 2023, Weber, 2023, Weber et al., 2024

# Elimination

## *M. hyopneumoniae* in USA:

- seit 15-20 Jahren Ansätze zur  
Elimination

<https://doi.org/10.54846/am2024/144>

### *Mycoplasma hyopneumoniae* vs PRRSV elimination differences

M. C. Rahe

Department of Population Health and Pathobiology, North Carolina State University, Raleigh, North Carolina

<https://doi.org/10.54846/am2024/146>

### Current trends in *Mycoplasma hyopneumoniae* eradication

A. Sponheim<sup>1,2</sup>, DVM; E. Fano<sup>2,\*</sup>, DVM, MSc, PhD; M. Pieters<sup>1,3,4</sup>, DVM, PhD

<sup>1</sup>Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, St. Paul, Minnesota; <sup>2</sup>Boehringer Ingelheim Animal Health USA Inc., Duluth, Georgia; <sup>3</sup>Veterinary Diagnostic Laboratory, College of Veterinary Medicine, University of Minnesota, St. Paul, Minnesota; <sup>4</sup>Swine Disease Eradication Center, College of Veterinary Medicine, University of Minnesota, St. Paul, Minnesota;

<sup>\*</sup>Current affiliation: Pipestone Veterinary Services, Pipestone, Minnesota

#### DEVELOPMENT OF AN ACCESSIBLE, PRACTITIONER-FOCUSED OUTREACH TOOL FOR MYCOPLASMA HYOPNEUMONIAE ERADICATION

A. Sponheim<sup>1</sup>, E. Fano<sup>2</sup>, M. Pieters<sup>3</sup>

<sup>1</sup>Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, St. Paul, MN, USA; <sup>2</sup>Boehringer Ingelheim Animal Health USA Inc., Duluth, GA, USA

<sup>3</sup>Boehringer Ingelheim Animal Health USA Inc., Duluth, GA, USA; <sup>\*</sup>Current affiliation: Pipestone Veterinary Services, Pipestone, MN, USA

<sup>4</sup>Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, St. Paul, MN; <sup>5</sup>Veterinary Diagnostic Laboratory, College of Veterinary Medicine, University of Minnesota, St. Paul, MN; <sup>6</sup>Swine Disease Eradication Center,

- **Depopulation and repopulation:** This is the time-tested, quickest method to eliminate *M. hyopneumoniae*, with the greatest likelihood of success, however, it is generally the most expensive.
- **“Swiss” model:** Has been demonstrated to be very effective but requires a partial depopulation of farrowing, requiring the farrowing house to be completely empty for 1 turn followed by removal of all animals less than 10 months of age.
- **Herd closure and whole herd medication:** One of the most popular methods and can be done with minimal effects on production, depending on the facility and management. This method has been used in combination with other pathogen eliminations, predominantly with PRRSV and with PEDV. Herd closure and whole herd medication method has a moderate cost and has a good success rate. This is the method that I have used for most of my and our clinics clients’ eliminations for these reasons. Herd closure and whole herd medication program is detailed in Figure 2 and the long-term success rate of this method in comparison to other methods are shown in Table 1.
- **Whole herd medication without closure:** This method allows for rapid return to negative status but has more cost due to medication programs (there are multiple different ones that have been used) and lower rate of success is the whole herd medication without closure program is detailed in Figure 3 and long-term success rate of this method in comparison to other methods is shown in Table 1.



# Elimination

<https://doi.org/10.54846/am2024/141>

## ***M. hyopneumoniae* in USA:**

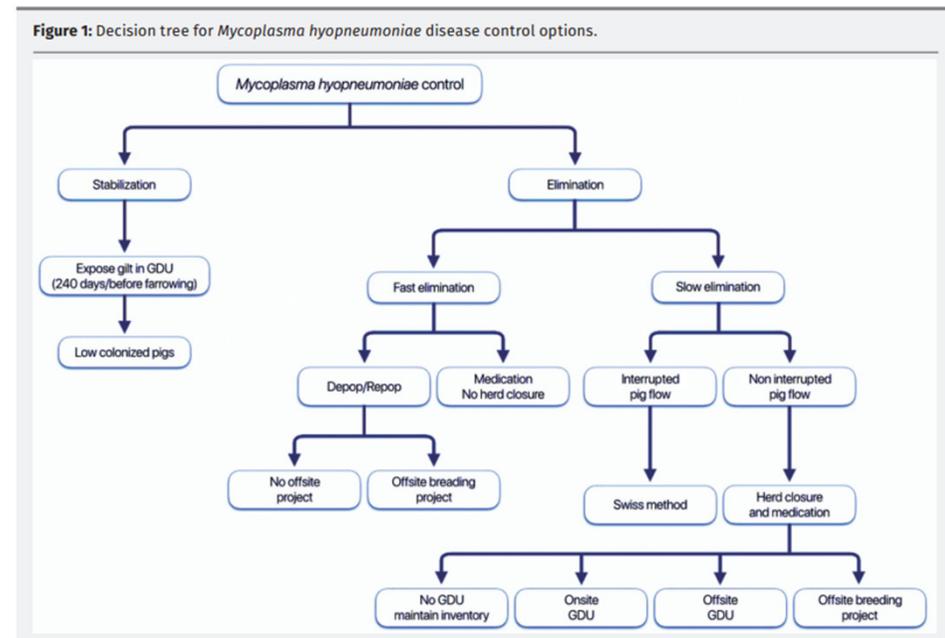
- regionale Elimination ist derzeit nicht zu erwarten

## ***M. hyopneumoniae* weltweit:**

- Stabilisierung der Betriebe insb. durch Vakzination

## ***Mycoplasma* elimination from a regional to national level (why aren't we there yet?)**

P. Yeske, DVM, MS  
Swine Vet Center, St. Peter Minnesota



# Mycoplasma hyorhinis

Silva et al. BMC Veterinary Research (2023) 19:268  
<https://doi.org/10.1186/s12917-023-03807-w>

BMC Veterinary Research

## TEMPORAL TRENDS OF S. SUIS, G. PARASUIS, M. HYORHINIS, A. SUIS, AND M. HYOSYNOVIAE

A.P. Serafini Poeta Silva<sup>1</sup>, M. Almeida<sup>1</sup>, A. Michael<sup>2</sup>, M. Rahe<sup>3</sup>, C. Siepker<sup>2</sup>, D. Magstadt<sup>2</sup>, P. Piñeyro<sup>4</sup>, B. Arruda<sup>5</sup>, N. Macedo<sup>6</sup>, O. Sahin<sup>6</sup>, P. Gauger<sup>1</sup>, K. Krueger<sup>7</sup>, R. Mugabi<sup>1</sup>, J. Santos Streauslin<sup>1</sup>, G. Trevisan<sup>1</sup>, D. Linhares<sup>1</sup>, G. De-Sousa-E-Silva<sup>8</sup>, E. Fano<sup>9</sup>, R. Main<sup>1</sup>, K. Schwartz<sup>10</sup>, E. Burrough<sup>1</sup>, R. Derscheid<sup>2</sup>, P. Siththicharoenchai<sup>3</sup>, M.J. Clavijo<sup>11</sup>

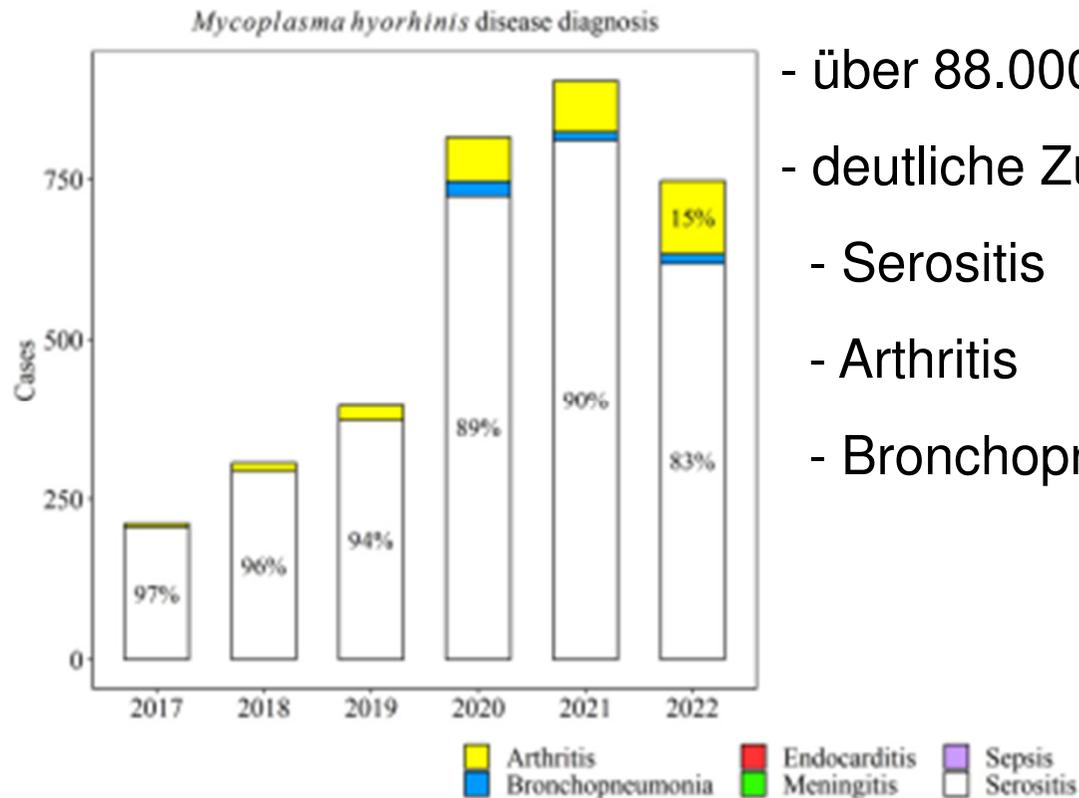
RESEARCH

Open Access

Detection and disease diagnosis trends (2017–2022) for *Streptococcus suis*, *Glaesserella parasuis*, *Mycoplasma hyorhinis*, *Actinobacillus suis* and *Mycoplasma hyosynoviae* at Iowa State University Veterinary Diagnostic Laboratory

Ana Paula Serafini Poeta Silva<sup>1</sup>, Marcelo Almeida<sup>1</sup>, Alyona Michael<sup>1</sup>, Michael C. Rahe<sup>1</sup>, Christopher Siepker<sup>1</sup>, Drew R. Magstadt<sup>1</sup>, Pablo Piñeyro<sup>1</sup>, Bailey L. Arruda<sup>1,2</sup>, Nubia R. Macedo<sup>1</sup>, Orhan Sahin<sup>1</sup>, Philip C. Gauger<sup>1</sup>, Karen M. Krueger<sup>1</sup>, Robert Mugabi<sup>1</sup>, Jessica S. Streauslin<sup>1</sup>, Giovanni Trevisan<sup>1</sup>, Daniel C. L. Linhares<sup>1</sup>, Gustavo S. Silva<sup>1</sup>, Eduardo Fano<sup>1</sup>, Rodger G. Main<sup>1</sup>, Kent J. Schwartz<sup>1</sup>, Eric R. Burrough<sup>1</sup>, Rachel J. Derscheid<sup>11</sup>, Panchan Siththicharoenchai<sup>11</sup> and Maria J. Clavijo<sup>1</sup>

## Retrospektive Auswertung in USA:



- über 88.000 Proben
- deutliche Zunahme seit 2017
- Serositis
- Arthritis
- Bronchopneumonie

# Mycoplasma hyorhinis

Silva et al. BMC Veterinary Research (2023) 19:268  
https://doi.org/10.1186/s12917-023-03807-w

BMC Veterinary Research

## TEMPORAL TRENDS OF *S. SUIS*, *G. PARASUIS*, *M. HYORHINIS*, *A. SUIS*, AND *M. HYOSYNOVIAE*

A.P. Serafini Poeta Silva<sup>1</sup>, M. Almeida<sup>1</sup>, A. Michael<sup>2</sup>, M. Rahe<sup>3</sup>, C. Siepker<sup>2</sup>, D. Magstadt<sup>2</sup>, P. Piñeyro<sup>4</sup>, B. Arruda<sup>5</sup>, N. Macedo<sup>6</sup>, O. Sahin<sup>6</sup>, P. Gauger<sup>1</sup>, K. Krueger<sup>7</sup>, R. Mugabi<sup>1</sup>, J. Santos Streauslin<sup>1</sup>, G. Trevisan<sup>1</sup>, D. Linhares<sup>1</sup>, G. De-Sousa-E-Silva<sup>8</sup>, E. Fano<sup>9</sup>, R. Main<sup>1</sup>, K. Schwartz<sup>10</sup>, E. Burrough<sup>1</sup>, R. Derscheid<sup>2</sup>, P. Sithicharoenchai<sup>3</sup>, M.J. Clavijo<sup>11</sup>

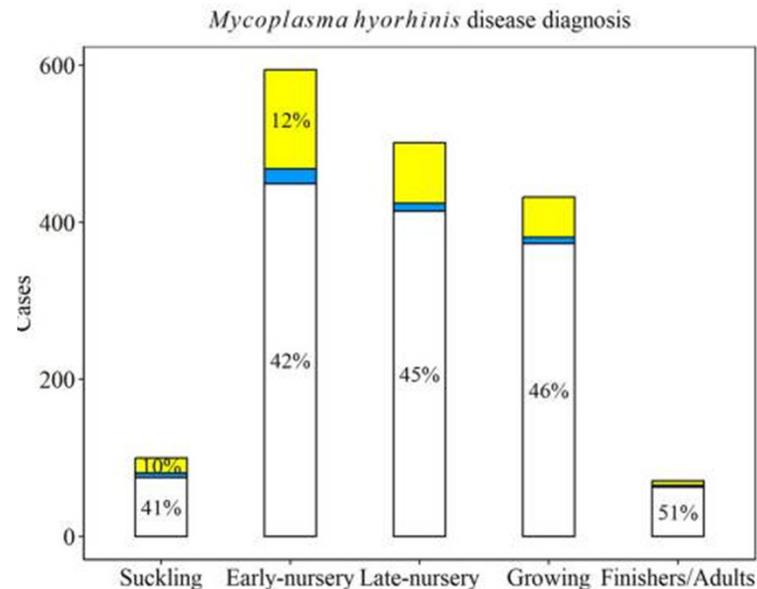
RESEARCH

Open Access

Detection and disease diagnosis trends (2017–2022) for *Streptococcus suis*, *Glaesserella parasuis*, *Mycoplasma hyorhinis*, *Actinobacillus suis* and *Mycoplasma hyosynoviae* at Iowa State University Veterinary Diagnostic Laboratory

Ana Paula Serafini Poeta Silva<sup>1</sup>, Marcelo Almeida<sup>1</sup>, Alyona Michael<sup>1</sup>, Michael C. Rahe<sup>1</sup>, Christopher Siepker<sup>1</sup>, Drew R. Magstadt<sup>1</sup>, Pablo Piñeyro<sup>1</sup>, Bailey L. Arruda<sup>1,2</sup>, Nubia R. Macedo<sup>1</sup>, Orhan Sahin<sup>1</sup>, Philip C. Gauger<sup>1</sup>, Karen M. Krueger<sup>1</sup>, Robert Mugabi<sup>1</sup>, Jessica S. Streauslin<sup>1</sup>, Giovanni Trevisan<sup>1</sup>, Daniel C. L. Linhares<sup>1</sup>, Gustavo S. Silva<sup>1</sup>, Eduardo Fano<sup>1</sup>, Rodger G. Main<sup>1</sup>, Kent J. Schwartz<sup>1</sup>, Eric R. Burrough<sup>1</sup>, Rachel J. Derscheid<sup>11</sup>, Panchan Sithicharoenchai<sup>11</sup> and Maria J. Clavijo<sup>11</sup>

## Retrospektive Auswertung in USA:



- über 88.000 Proben
- deutliche Zunahme seit 2017
- Serositis
- Arthritis
- Bronchopneumonie
- insb. Anfang Aufzucht
- Zunahme auch von GPS und *S. suis*

# Mycoplasma hyorhinis

Silva et al. BMC Veterinary Research (2023) 19:268  
<https://doi.org/10.1186/s12917-023-03807-w>

BMC Veterinary Research

## TEMPORAL TRENDS OF S. SUIIS, G. PARASUIS, M. HYORHINIS, A. SUIIS, AND M. HYOSYNOVIAE

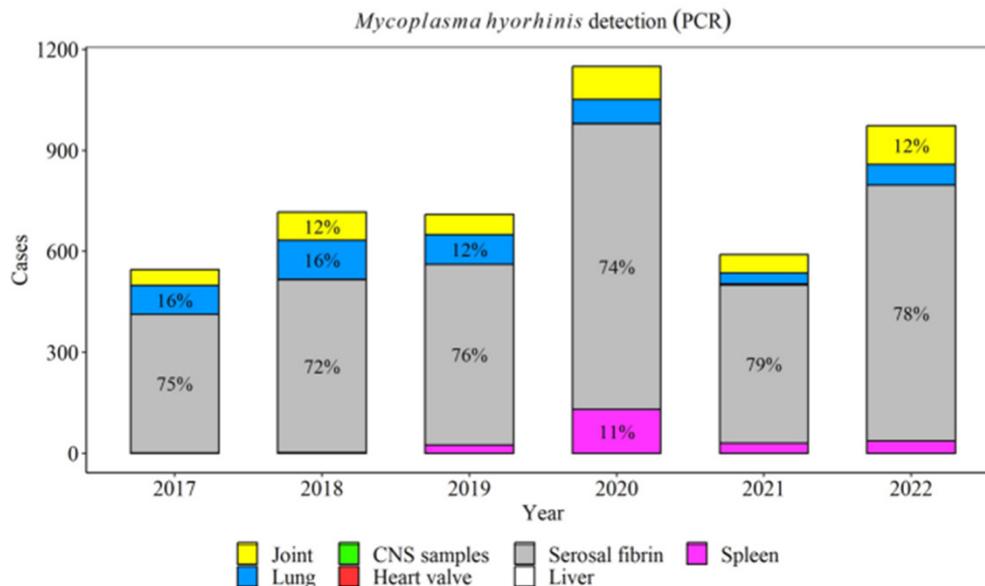
A.P. Serafini Poeta Silva<sup>1</sup>, M. Almeida<sup>1</sup>, A. Michael<sup>2</sup>, M. Rahe<sup>3</sup>, C. Siepker<sup>2</sup>, D. Magstadt<sup>2</sup>, P. Piñeyro<sup>4</sup>, B. Arruda<sup>5</sup>, N. Macedo<sup>6</sup>, O. Sahin<sup>6</sup>, P. Gauger<sup>1</sup>, K. Krueger<sup>7</sup>, R. Mugabi<sup>1</sup>, J. Santos Streauslin<sup>1</sup>, G. Trevisan<sup>1</sup>, D. Linhares<sup>1</sup>, G. De-Sousa-E-Silva<sup>8</sup>, E. Fano<sup>9</sup>, R. Main<sup>1</sup>, K. Schwartz<sup>10</sup>, E. Burrough<sup>1</sup>, R. Derscheid<sup>2</sup>, P. Sitthicharoenchai<sup>3</sup>, M.J. Clavijo<sup>11</sup>

RESEARCH

Open Access

Detection and disease diagnosis trends (2017–2022) for *Streptococcus suis*, *Glaesserella parasuis*, *Mycoplasma hyorhinis*, *Actinobacillus suis* and *Mycoplasma hyosynoviae* at Iowa State University Veterinary Diagnostic Laboratory

Ana Paula Serafini Poeta Silva<sup>1</sup>, Marcelo Almeida<sup>1</sup>, Alyona Michael<sup>1</sup>, Michael C. Rahe<sup>1</sup>, Christopher Siepker<sup>1</sup>, Drew R. Magstadt<sup>1</sup>, Pablo Piñeyro<sup>1</sup>, Bailey L. Arruda<sup>1,2</sup>, Nubia R. Macedo<sup>1</sup>, Orhan Sahin<sup>1</sup>, Philip C. Gauger<sup>1</sup>, Karen M. Krueger<sup>1</sup>, Robert Mugabi<sup>1</sup>, Jessica S. Streauslin<sup>1</sup>, Giovani Trevisan<sup>1</sup>, Daniel C. L. Linhares<sup>1</sup>, Gustavo S. Silva<sup>1</sup>, Eduardo Fano<sup>1</sup>, Rodger G. Main<sup>1</sup>, Kent J. Schwartz<sup>1</sup>, Eric R. Burrough<sup>1</sup>, Rachel J. Derscheid<sup>11</sup>, Panchan Sitthicharoenchai<sup>11</sup> and Maria J. Clavijo<sup>11</sup>



|   |             |             |
|---|-------------|-------------|
| <b><i>M. hyorhinis</i> cases</b>                    | <b>3292</b> | <b>100%</b> |
| <i>M. hyorhinis</i> (only)                          | 281         | 9%          |
| <i>M. hyorhinis</i> + any other infectious etiology | 3011        | 91%         |
| <i>M. hyorhinis</i> + PRRSV                         | 345         | 10%         |

- Nachweis gut aus serösen Häuten mit fibrinösen Veränderungen
- Nachweis weniger häufig aus Synovia
- Koinfektionen insb. PRRSV, *S. suis*, GPS

# Mycoplasma hyorhinis

## Spanien:

- Polyserositiden meist in 5. - 7. Lebenswoche

- häufig Perikarditis und Arthritis

- in 30% der Fälle Nachweis von GPS, *S. suis* und *M. hyorhinis*

- evtl. Einfluss von PRRSV-Infektionen

### SURVEY ON POLYSEROSITIS LESIONS IN NURSERY PIGS FROM SPANISH AND BRAZILIAN FARMS

M. Sibila<sup>1</sup>, V. Aragón<sup>1</sup>, L.G. De Oliveira<sup>2</sup>, J. Segalés<sup>3</sup>, F. Correa-Fiz<sup>1</sup>

<sup>1</sup>IRTA Programa de Sanitat Animal, Centre de Recerca en Sanitat Animal (CRESA), Campus de la Universitat Autònoma de Barcelona (UAB), Bellaterra, 08193 Barcelona, Spain

<sup>2</sup>São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, Brazil.

<sup>3</sup>Unitat Mixta d'Investigació IRTA-UAB en Sanitat Animal, Centre de Recerca en Sanitat Animal (CRESA), and Departament de Sanitat i Anatomia Animals, Facultat de Veterinària, Campus de la Universitat Autònoma de Barcelona (UAB), 08193 Bellaterra, Spain

## Italien:

- Fallbericht Arthritiden

- *M. hyorhinis* und *M. hyosynoviae*

- Nachweis aus Perikardtupfer und Synovia

- Therapie mit Tiamulin

### OUTBREAK OF ARTHRITIS IN PIGS WITH INVOLVEMENT OF MYCOPLASMA HYORHINIS AND MYCOPLASMA HYOSYNOVIAE

M. Merenda<sup>1</sup>, M. Gastaldelli<sup>1</sup>, A. Tondo<sup>1</sup>, G. Foiani<sup>2</sup>, C. Tonelli<sup>3</sup>, P. Mondin<sup>4</sup>, D. Prativiera<sup>1</sup>, V. Righetti<sup>1</sup>, R. Bardini<sup>5</sup>, G. Nai<sup>1</sup>, D. Vio<sup>6</sup>

<sup>1</sup>Mycoplasma Unit, SCT-1 Verona, Istituto Zooprofilattico Sperimentale delle Venezie, Buttapietra (VR), Italy

<sup>2</sup>Laboratorio di Istopatologia, SCS3, Istituto Zooprofilattico Sperimentale delle Venezie, Legnaro (PD), Italy

<sup>3</sup>Private Practice Veterinarian

<sup>4</sup>Huvepharma NV, Antwerp, Belgium

<sup>5</sup>Trownutrition, Mozzecane (VR), Italy

<sup>6</sup>Laboratorio di Patologia e Benessere della Specie Suina, SCT4, Istituto Zooprofilattico Sperimentale delle Venezie, Cordenons (PN), Italy

# Mycoplasma hyorhinis

## Niederlande:

DETECTION OF MYCOPLASMA HYOPNEUMONIAE AND MYCOPLASMA HYORHINIS IN WEANED PIGLETS PRESENTING RESPIRATORY SYMPTOMS IN THE NETHERLANDS

H. Prüst<sup>1</sup>, M. Steenaert<sup>1</sup>, M. Genzow<sup>2</sup>, C. Sanderman<sup>3</sup>, H. Kreuzmann<sup>3</sup>, K. Junker<sup>3</sup>

- Nachweis von *M. hyorhinis* in 79% der Fälle von PRDC

## Österreich:



Article

### Retrospective Analysis of the Detection of Pathogens Associated with the Porcine Respiratory Disease Complex in Routine Diagnostic Samples from Austrian Swine Stocks

René Renzhammer<sup>1</sup>, Angelika Auer<sup>2</sup>, Igor Loncaric<sup>3</sup>, Annabell Entenfellner<sup>4</sup>, Katharina Dimmel<sup>2</sup>, Karin Walk<sup>2</sup>, Till Rümenapf<sup>2</sup>, Joachim Spargser<sup>3</sup> and Andrea Ladinig<sup>1,\*</sup>

Renzhammer et al., 2023

- 1.975 Proben von Schweinen mit resp. Symptomatik

- *M. hyorhinis* mit 55% der am häufigsten nachgewiesene Erreger
- signifikanter Zusammenhang zwischen Nachweis von *M. hyorhinis* und *S. suis*

# Mycoplasma hyorhinis

## MYCOPLASMA HYORHINIS ISOLATED FROM THE CENTRAL NERVOUS SYSTEM OF PIGLETS WITH MENINGITS

M. Büniger<sup>1</sup>, J. Spergser<sup>2</sup>, L. Schwarz<sup>1</sup>, R. Brunthaler<sup>3</sup>, P. Pineyro<sup>4</sup>, A. Griessler<sup>5</sup>, A. Ladinig<sup>1</sup>

<sup>1</sup>University Clinic for Swine, Department for Farm Animals and Veterinary Public Health, University of Veterinary Medicine Vienna, Vienna, Austria

<sup>2</sup>Institute of Microbiology, University of Veterinary Medicine Vienna, Austria

<sup>3</sup>Institute of Pathology, University of Veterinary Medicine Vienna, Austria

<sup>4</sup>Department of Veterinary Diagnostic and Production Animal Medicine, Veterinary Diagnostic Laboratory, Iowa State University, Ames, IA

<sup>5</sup>Traunkreis Vetclinic OG Grossendorf 3, 4551 Ried im Traunkreis - Austria

## Österreich:

- Fallbericht

- Absetzferkel mit Arthritiden und ZNS-Symptomatik

- fibrinöse Meningitis, Serositis und Arthritis

- Nachweis von *M. hyorhinis* aus ZNS, Lunge, Serosentupfern und

Synovia



## A core genome multilocus sequence typing scheme for *Mycoplasma hyorhinis*

Moritz Büniger<sup>a,b</sup>, Magdalena Posch<sup>a</sup>, Julia Wiesauer<sup>a</sup>, Igor Loncaric<sup>a</sup>, Adriana Cabal Rosel<sup>c</sup>, Werner Ruppitsch<sup>c</sup>, Andrea Ladinig<sup>b</sup>, Joachim Spergser<sup>a,\*</sup>

<sup>a</sup> University of Veterinary Medicine Vienna, Institute of Microbiology, Veterinärplatz 1, 1210, Vienna, Austria

<sup>b</sup> University of Veterinary Medicine Vienna, University Clinic for Swine, Veterinärplatz 1, 1210, Vienna, Austria

<sup>c</sup> Austrian Agency for Health and Food Safety, Institute of Medical Microbiology and Hygiene, Währinger Straße 25A, 1096, Vienna, Austria

M. Büniger et al.

Veterinary Microbiology 262 (2021) 109249

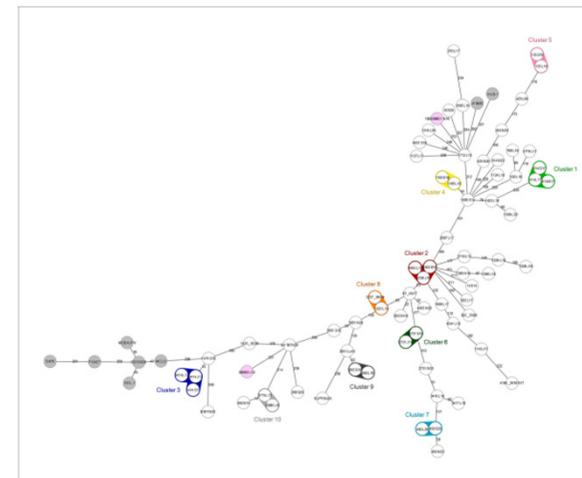


Fig. 1. Minimum spanning tree based on allelic profiles of 453 core genome targets from 81 *M. hyorhinis* strains. The distance matrix underlying the network was built from all pairwise allelic profile comparisons of 453 cgMLST targets using the pairwise ignoring-missing-values option in ScoSphere - software. Ten distinct clonal clusters with fewer than 8 allele differences are color coded. Strain origin is indicated by the color of the circles: pink = Germany, grey = publicly available genome, white = Austria. The number on connecting lines illustrates the number of differing alleles in a pairwise comparison.

Büniger et al., 2021

# Schlussfolgerung

## **ASP:**

- weltweite Eradikation von ASP ist nicht zu erwarten
- Bekämpfungsstrategien gegen ASP sehr heterogen
- Optimierung der Biosicherheit sinnvoll

## **andere Erreger:**

- Eliminationen häufig schwierig
- Vakzinationen von weiter zunehmend hoher Bedeutung
- steigende Relevanz von *M. hyorhinis* weltweit erkennbar