Poul Baekbo

DVM, PhD, Dipl. ECPHM

SEGES Pig Research Centre

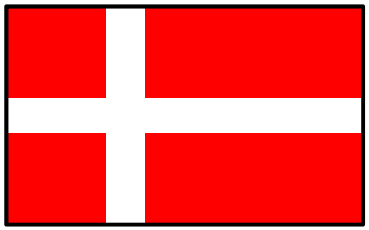
PIG DISEASES

EU-CN R&D meeting
BRX, 27.10.16

Dan Avl

Danish Pig Research Centre

SEGES



31 million pigs produced per year in **DENMARK**:

- 19 mill slaughtered (Export of 2 mill tons)
- Export of 12 mill weaners

Danish Pig
Research Centre

SEGES

WHO IS *POUL BAEKBO* ?

Veterinarian in 1982 (DVM)

- PhD 1989
- Dipl. ECPHM 2009

- 2 years in general practice at the countryside

- 6 years at the Veterinary University in Copenhagen
  - Research in diseases of pigs (PhD) and horses

- **26 years in pig disease R&D for the pig industry**

WHAT IS SEGES ?

- **The farmers own advisory and research organisation**

- **The Pig Research Centre** is one of the units of SEGES
- About 650 employees
- Annual turnover is one billion DKK =133 million EURO
- Owned by the **Danish Agriculture & Food Council**

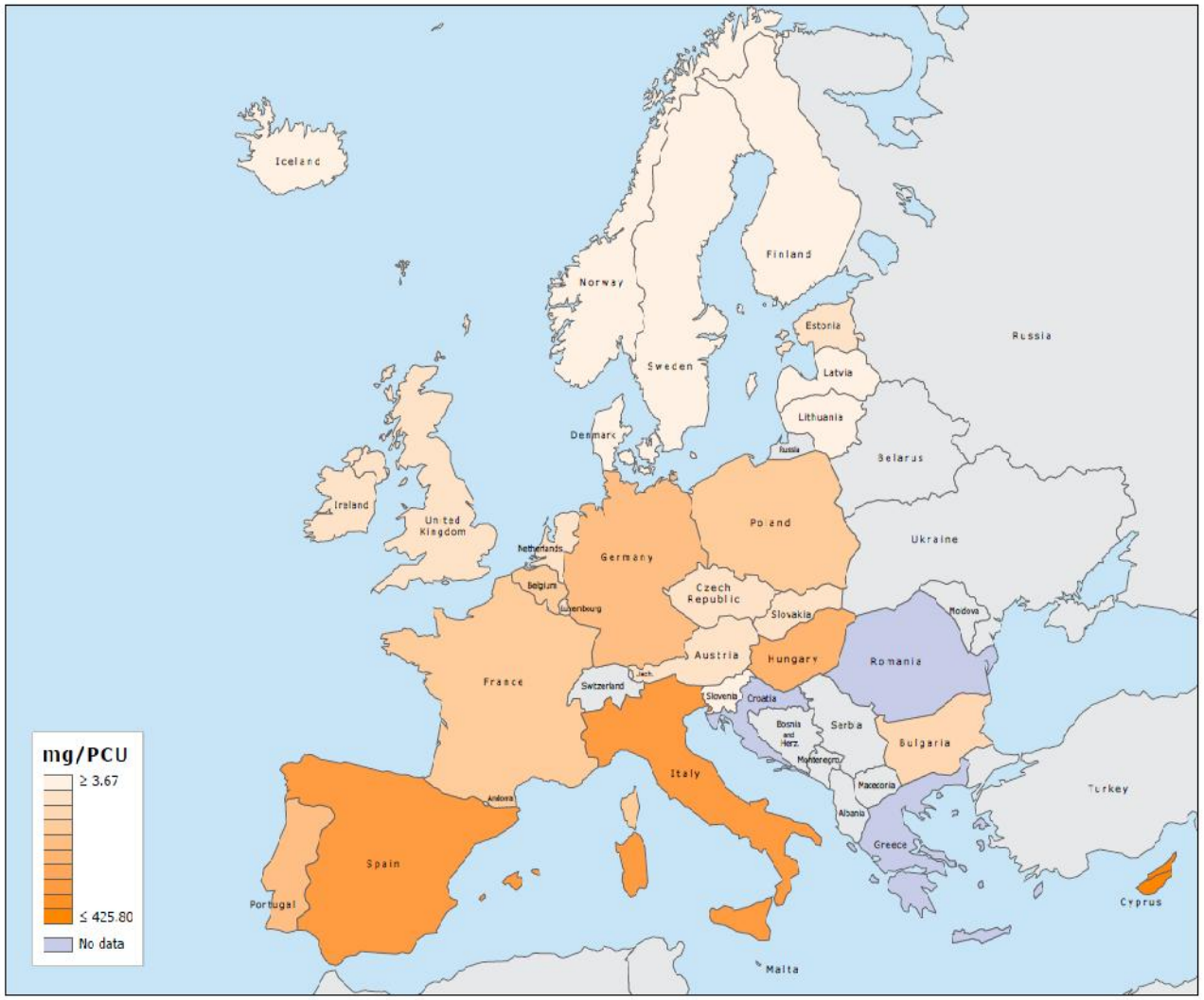
THE OVERALL CHALLENGE

To ensure a *cost-efficient* pig production
with **minimal use of antibiotic**

The main driver:

- The risk of development of ***antimicrobial resistance*** (AMR) jeopardising **human health** & animal health

TOTAL SALES OF ANTIBIOTICS (ESVAC, OCT15)



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DISEASE CHALLENGES

Emerging & re-emerging of *endemic* **virus infections**:

- PRRS (high pathogenic strains not in EU)
- PED (porcine epidemic diarrhoea)
- Pseudorabies (Aujeszky) (minor importance in EU)

SPECIFIK DISEASE CHALLENGES 1

Diarrehoea (Piglets)

- PED
- TGE
- Rotavirus

Diarrehoea (Post weaning):

- *E. coli*
- *Lawsonia intracellularis* (Porcine Intestinal Adenomatosis)
- *Brachyspira hyodysenteriae* (Dysentry)

SPECIFIK DISEASE CHALLENGES 2

Porcine Respiratory Disease Complex (PRDC):

- *Mycoplasma hyopneumoniae*
- *Actinobacillus pleuropneumoniae*
- *Pasteurella multocida*

- PRRS
- PCV2
- Influenza

SPECIFIK DISEASE CHALLENGES 3

- Meningitis (Streptococcus)
- Infectious lamenes (*M. hyosynoviae*, *H. Parasuis*)
- Postpartum Dysgalactia Syndrome (PDS)
- Pseudorabies (Aujeszky)
- Zoonotic infections:
  - Salmonella
  - MRSA
  - HEV

R&D BASED INNOVATIVE SOLUTIONS 1

Center for **Veterinary Vaccinology**:

- Multivalent vaccines (PRDC)
- Routes of application (Oral & Aerosol)
- Independent assesment of efficacy

Center for **Disease Eradication** (elimination of infections)

Development of **Minimal Disease Production Systems**

- Housing conditions
- Flow of animals
- Infection control (minimal disease or SPF)

R&D BASED INNOVATIVE SOLUTIONS 2

Center for **Pen-side Diagnostics**

- On-line monitoring af symptoms/infections (Real-time)
- Support for timely and correct treatment

Surveillence of AMR in veterinary pathogens

Game-based learning

Questions ?