

From traditional to visual-only inspection in Denmark

Lis Alban^{1,2}, Jesper Valentin Petersen¹, Anne Kristine Bækbo¹, Tanja Østergaard Pedersen¹, Amanda Brinch Kruse², Goncalo Pacheco³, Marianne Halberg Larsen²

¹ Danish Agriculture & Food Council

² University of Copenhagen

³ Danish Veterinary and Food Administration



Introduction and aims

The EU Meat Inspection Regulation 854/2004

- Allowed use of risk assessments, when considering to change meat inspection
- For young calves and finishing pigs, raised indoors
 - For pigs, indoors meant under controlled housing conditions as specified in the EU Trichinella Regulation

In Denmark, it was decided to look at pigs

- Phase 1: Assessing the effect of visual-only inspection (VOI)
 - Using risk assessments
 - Only for finishing pigs raised under controlled housing conditions
- Phase 2: Slaughtered pigs with lesions indicating prior septicaemia,
 - Assessing the microbiological burden and effect of de-boning

Objective, materials and methods

To illustrate what the effect would be of changing inspection to VOI

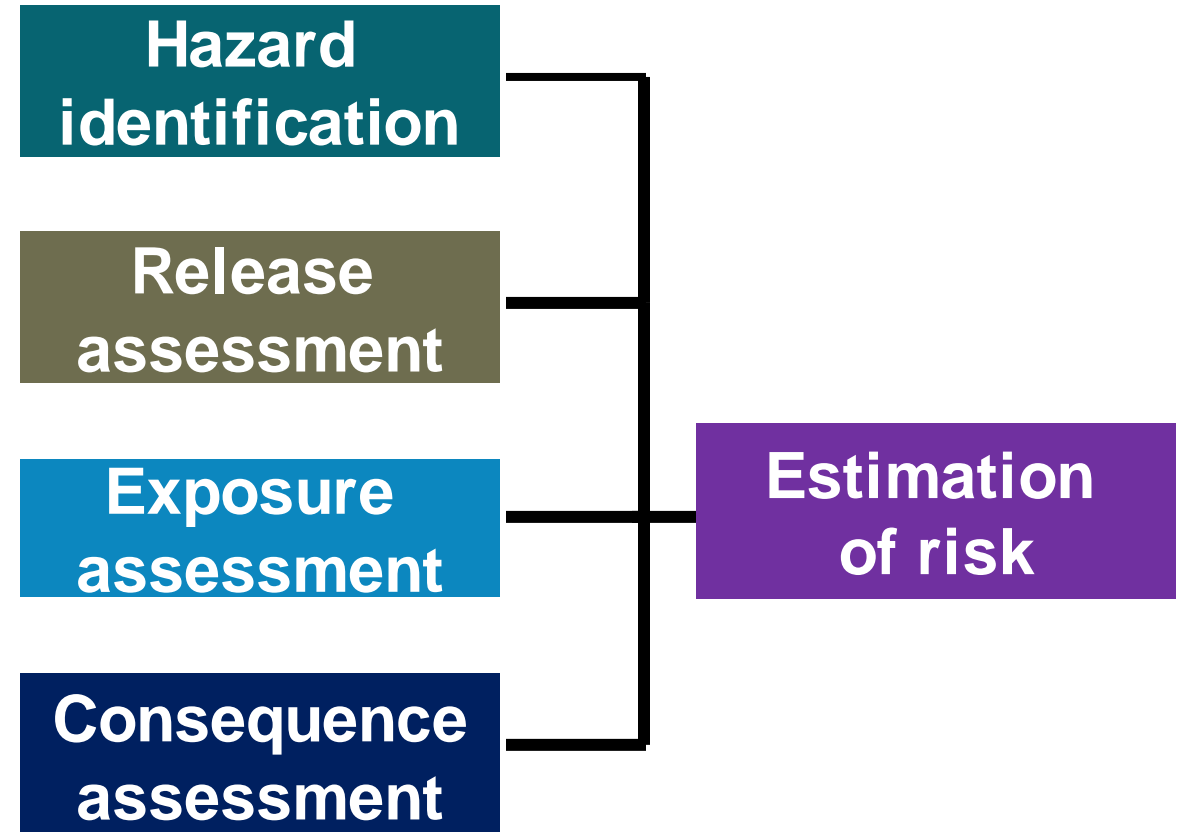
- Cut-by-cut, palpation-by-palpation
- OIE approach to risk assessment

Up-to-date in-country data used

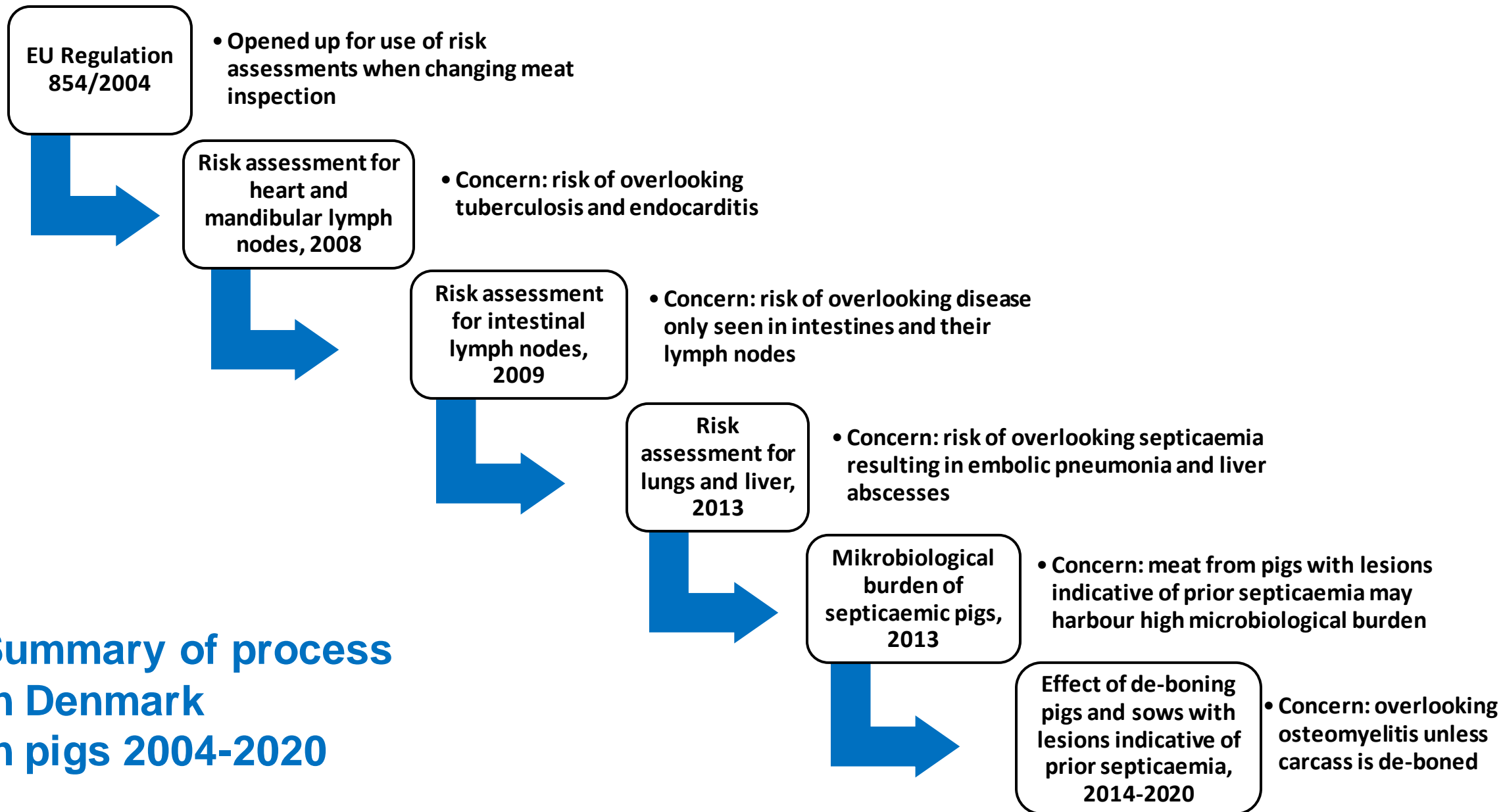
- Danish meat inspection database
- Own collection of samples taken during inspection/slaughter
- Worldwide literature
- Expert opinion

Collaboration

- Academia-Authority-Industry



Summary of process in Denmark in pigs 2004-2020



Results – in general



Finishing pig have few lesions of importance to food safety

- In DK, seriously ill pigs are euthanised on-farm due to animal welfare control
- The body is clearing itself after an infection
- Very low count of bacteria in muscles – also found occasionally in healthy controls

In most cases, lesions are macroscopically observable

- Except from endocarditis and small abscesses in lymph nodes
- Embolia in lungs may be overlooked, if few and only located deep in the tissue

Bacteria involved are usually not foodborne, but considered occupational hazards

- May cause infections in existing wounds in humans
- Lungs not considered edible tissue



Results - VOI

The approach led to a gradual implementation of VOI

For indoor finishing pigs, routine incisions/palpation were abandoned

1. Mandibular lymph nodes
2. Heart
3. Intestinal lymph nodes
4. Liver
5. Lungs

Unless data/findings during AM/PM indicate a need for additional inspection

Experience was gained regarding how to modify the slaughter line

- Enabling inspection of plucks hanging over intestines
- Mirrors and lights to ensure inspection and documentation



Results - Suspicion of septicaemia

Presence of lesions indicative of septicaemia needs careful evaluation

- In Denmark, so-called “pyaemia” investigation undertaken in the rework area

Acute cases → Total condemnation

Chronic cases → De-boning

Studies of septicaemia provided evidence

- Low microbiological burden of carcass
- Targeted cutting will ensure that osteomyelitis cases will be detected
- Hereby abscesses are removed

Changed to targeted cutting due to our work

Inspection of entire spine

