Differences in terminology and frequency of meat inspection lesions in finishing pigs in seven European countries – a pilot study

cost
EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

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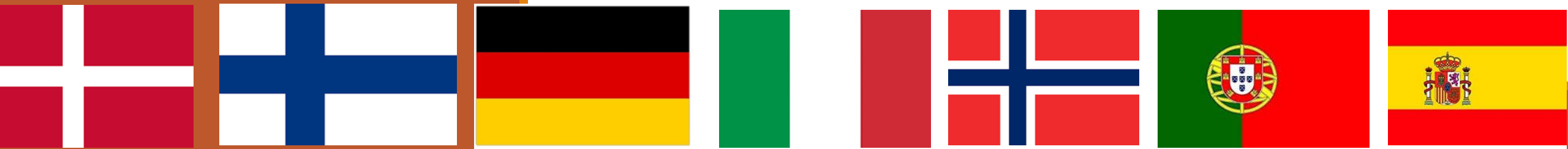


Background of study

WG4 impact of changes and alternatives to traditional meat inspection

The objectives of inspection

- To ensure food safety, animal health and animal welfare

Need for an inspection system to address these objectives in a more valid, feasible and cost-effective way than seen at current

- Hence, need for modernisation

We have focused on the lesion code systems in place (questionnaire just sent out)

- Used in relation to meat inspection of pigs

Regulation (EU) 2019/627 applies in all Member States

- But national coding systems are in place along with associated judgement

Would it be possible to harmonize the coding systems?

First, make a mapping of the systems in place

Materials and methods

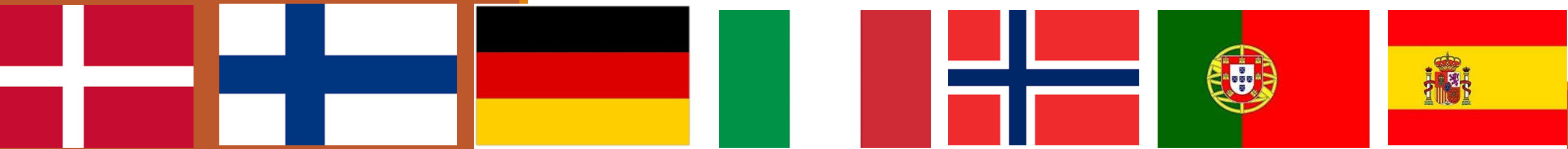
Information about lesion code systems in place gathered from seven European countries

- Denmark, Finland, Germany, Italy, Norway, Portugal, and Spain
- Representing a broad variety of European pig production

Pig meat inspection data from 2019 were collected

- >1 M pigs examined in each country
- Divided into total and partial condemnation

Data used to compare systems, terminology and frequencies of lesion codes connected with partial or total condemnation



Preliminary results

Different number of codes in use in the 7 countries

- Some countries have separate lists for total and partial condemnation. Others use the same list (DK, Italy)
- Large variations on number of codes (from 44 for Italy to 207 for Portugal from which 138 for pigs)
- One code per condemned pig (Portugal) /more than two codes (Denmark up to 4) can be used per pig
- In some countries, one list for all animal ungulate species (Portugal) – in other countries, one list per species (DK9

Hence, different systems in place

- Different purposes, therefore varying levels of details
  - **Probably reflecting the national epidemiological situation, the local production, food safety culture, and the trade agreements in place**
- Will make it challenging to seek harmonization

- But we shall try…

Top 10 causes of most common condemnations

	Germany	Denmark	*Finland	Italy	Norway	Portugal	Spain
1	Multiple Abscesses	Complications to generalised conditions	Pleuritis	fecal biliar contamination	Systemic disease: sepsis, pyemia, toxemia or viremia	Osteitis	Multiple abscesses
2	Organoleptic anomalies	Osteomyelitis including related soft absceses	Ascariosis	Enteritis/Colitis	Phlegmone/abscess	Polyarthritis and Arthritis	Jaundice/Icterus
3	Mechanical errors related to slaughtering	Mechanical errors related to slaughtering – small impact	Pericarditis	Erysipelas	Peritonitis	Multiple Abscesses	Septicaemia
4	General Illness	Acute pleurisy	Abscess	Spinal abscesses	Pericarditis/pleurisy	Peritonitis	Erysipelas
5	Miscellaneous: Other pathophysiological alterations	Icterus	Arthritis	Arthritis/bursitis	Alimentary tract changes or diseases	Pneumonia	Peritonitis
6	Miscelaneous: Other reasons for condemnation	Gastric ulcer	Pneumonia	Abscesses neck shoulder	Changes or diseases in circulatory organs (heart, arteria or veins)	Pleuropneumonia	Bloody meat??
7	Polyarthritis	Rectal stricture	Tail biting	Peritonitis	Abnormal colour	Cachexia	Cachexia
9	Tail biting	Acute erysipelas		Pleurisy (cranial and middle lobes)	Arthritis or changes	Multiple lung or pleural abscesses	
9	Cachexia	Chronic pleurisy		Cachexia	Pneumonia	Traumatized, bloody or disgusting Meat	
10	Erysipelas	Acute peritonitis		Abscesses thigh	Urinary tract diseases	Slaughter process deficiencies	

*not the list for total condemnations, but the list of most common lesions

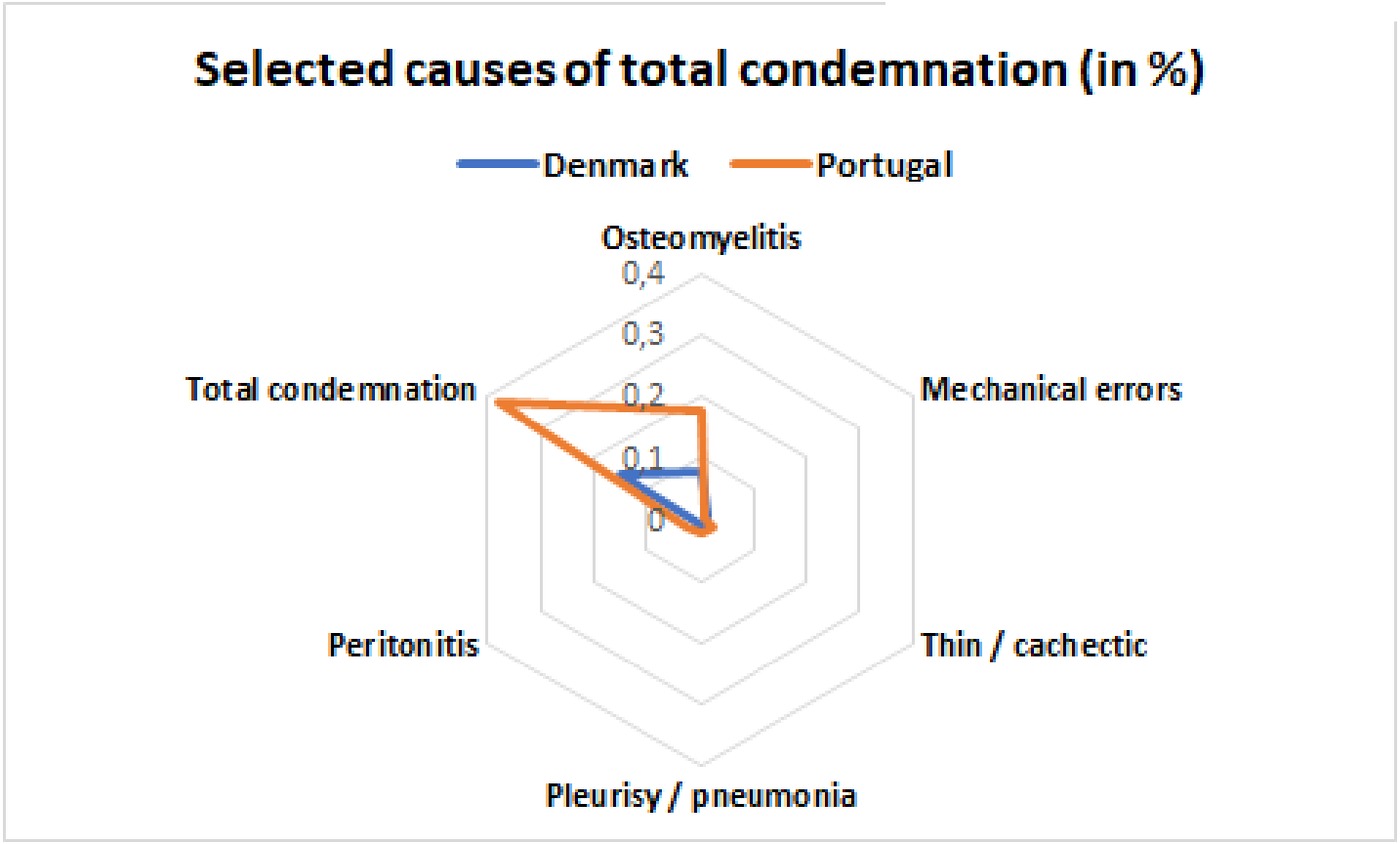
Example of result of comparison

Reasons for differences will be investigated

- Can be due to true variation
- But also due to the lesion code system and how it is applied in practice (IT system in place, e.g. one or more codes/pig) and guidelines for application

Substantial variation in prevalence of total condemnation

- From 0.15% to 0.51% in the 7 countries
- (consider also differences in breeding system, breeds, age and weight of animals)



Future work

Analyse collected data

- Similarities
- Differences
- Analysis of different logical structures of the national lesion code systems

SWOT-like analysis (both on CA and FBO side)

Partial condemnation

Ante mortem

Perspectives and goals (dreams?)

The results of our work may be used by individual countries to update their coding system

- Hereby, the systems may be more harmonised
- **While respecting the national epidemiological situation, the local food safety culture, the differences in production and the trade agreements in place**

Ambitions:

- Most cost-efficient logic structure of systems – share best practice
- **MAYBE** Unique EU lesion code + open for extra national and corporate codes