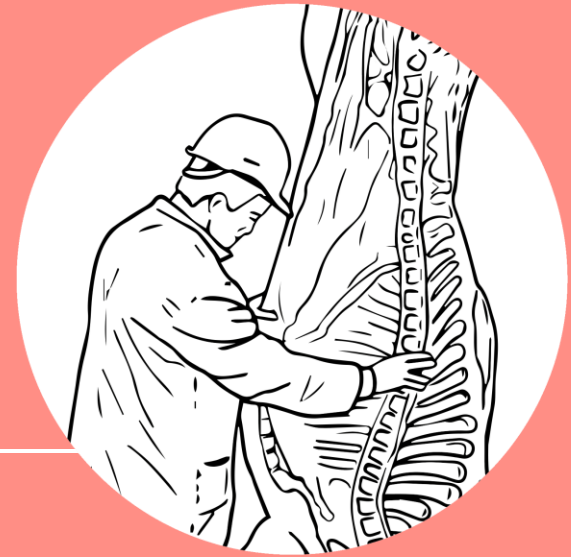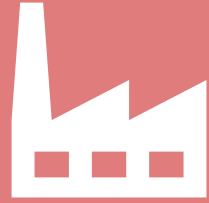# CA18105

RIBMINS

Risk-based meat inspection and integrated meat safety assurance

WG 3 - Abattoir level controls and risk categorisation of abattoirs

Dragan Antic | 16. 10. 2020. | RIBMINS online conference

WG3 Abattoir level: controls + risk categorization

leader:

Dragan Antic
[Univ. of Liverpool | UK]

vice-leader:

Kurt Houf
[Univ. Gent | BE]

WG3 specific objectives

- assessment of effectiveness of new tools | methods for detection of carcass contamination
- assessment of the significant intervention strategies and alternative methods for the slaughtering | the carcass dressing

Years 1 & 2

- assessment of the performance of food safety management systems
- HEI in risk categorisation of abattoirs

Years 3 & 4

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WG3   timeline

- set-up after kick-off meeting
  - report 1 due
- training school (in preparation)…
  - report 2 due

Y I   **Y II**   **Y III**   **Y IV**

- meeting in Belgrade [RS] in Jan-20
  - working on abattoir interventions reviews, to finalise the questionnaire for stakeholders
  - discussing approaches against carcass contamination

WG3   ongoing activities

- Performing systematic literature reviews/meta-analyses on:
  - interventions for the reduction of bacterial load on beef | sheep | pig | chicken carcasses at abattoirs
  - tools | methods for detection of carcass contamination and pathological lesions ('vision systems')

- Developing a stakeholders oriented survey to identify current industry perspectives and uptake of interventions | 'vision systems' in Europe

- Interventions: - actions taken during meat processing to reduce microbial contamination of carcasses: for example, carcass surface knife trimming or lactic acid wash

- Meta-analysis - combining data from multiple studies and analysing it together to increase power and provide a clearer picture of the effect of intervention on an outcome

- The task is finalised, report delivered (FSA project FS430388)

- Interventions analysed:
  - cattle hide shellac coating
  - beef carcass water and hot water wash
  - steam vacuuming and steam pasteurisation
  - lactic acid wash
  - multiple interventions
  - dry/spray chilling

- Steam pasteurisation effect:
  - ***E. coli*** prevalence (RR 0.15, 95% CI 0.09-0.26) and counts (0.54 log CFU/cm²; 95% CI 0.34-0.73)
  - **Enterobacteriaceae** prevalence (RR 0.17, 95% CI 0.07-0.43) and counts 1.04 log CFU/cm² (95% CI 0.60-1.48)
  - **ACC** reduced by 1.14 log CFU/cm² (95% CI 0.93-1.35)

Contributors

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- The task is ongoing
- Literature searched 1970-2020
- ~ 80 articles eligible and characterized
- Risk-of-bias assessment ongoing, MA next step
- Interventions identified:
  - fleece cleanliness assessment
  - fleece shearing
  - sheep wash
  - gas de-pelting, inverted dressing
  - carcass water and hot water wash
  - steam pasteurisation
  - steam vacuuming
  - conventional and blast chilling

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- The task is ongoing

- Literature searched 2000-2020

- ~ 120 articles eligible and characterized

- Risk-of-bias assessment ongoing, MA next step

- Interventions identified:
  - logistic slaughter
  - SPP/GHP (scalding, dehairing, singeing, wash)
  - carcass hot water wash
  - steam pasteurisation
  - chemical washes (lactic acid, ASC)
  - novel (steam-ultra sound, pulsed light, phages)
  - conventional and blast chilling

Contributors

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- The task is ongoing
- Literature searched 2000-2020
- ~ 240 articles eligible and characterized
- Characterisation ongoing, RoB and MA next step
- Interventions identified:
  - logistic slaughter
  - SPP/GHP (scalding, water spray washing)
  - carcass hot water wash
  - steam pasteurisation
  - chemical washes (organic acids, ASC, TSP, CPC, PAA, ozone)
  - novel (steam-ultra sound, pulsed light, bacteriophages)
  - conventional and blast chilling

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RIBMINS

- The task is almost finished

- Literature searched 1900-2020

- ~ 170 articles eligible and characterized

- Data analysis from ~ 60 articles ongoing

- Paper writing next step

- 'Vision systems' identified:
  - Mostly for broiler chicken carcass faecal contamination and gross pathology

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WG3   Upcoming events

- WG3 – meeting   14 | 15-Dec-20   Paris [FR]

  - Discuss the progress report, dissemination and future activities in years 3 and 4 – including:

- WG3 – training School   Late 2021   Venue TBD

Thank you for the attention.
Please join us at

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