Session 3 – "Animal welfare and meat quality"

The costs, benefits and societal importance of animal welfare in slaughterhouse: A review
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Animal welfare is often perceived as an added expense for slaughterhouses. However, the benefits of prioritizing animal welfare extend far beyond direct financial gains, such as improved meat quality. One important perspective is that animal welfare should be considered a fundamental pillar of a slaughterhouse's operations—essentially, part of its "license to operate." The stunning of pigs, for example, remains a highly debated issue, particularly in Europe, and it could significantly influence the value creation for slaughterhouses in the future. In addition, consumers around the world are increasingly demanding higher standards for farm animal welfare and more sustainable livestock production. This trend reflects a broader shift in societal attitudes and values concerning animals. As scientific understanding of animals' cognitive and emotional capacities grows, ethical considerations around their handling are evolving, which may, in turn, influence patterns of animal product consumption. The rise in ethically motivated flexitarians, vegetarians, and vegans in various regions illustrates this change. It is well established that animal handling has a significant effect on meat quality. In this regard, attention to animal welfare directly affects value creation. Inadequate production systems and improper pre-slaughter handling not only raise welfare concerns but also negatively impact carcass quality and yield. For example, poor handling can lead to injuries such as haemorrhages, skin lesions, and wounds. Stressful pre-slaughter conditions often result in higher drip loss and pale, soft, exudative (PSE) meat, while chronic stress can cause high ultimate pH, producing dark, firm, and dry (DFD) meat. These issues lower carcass value by necessitating the removal of damaged sections and limiting the use of certain cuts for premium products. Research indicates that prioritizing animal welfare creates significant value—not only for the animals but also for the employees responsible for their care at slaughter. Handling live animals in slaughterhouses, ensuring they do not experience undue distress or suffering, is a considerable responsibility for staff. Even in the best-managed facilities, animals may experience some stress due to unfamiliar environments, new pen mates, loud noises, and unfamiliar handlers. Studies have shown that good animal welfare practices not only benefit the animals but also contribute positively to the working environment and employee well-being, ultimately impacting the overall success of the slaughterhouse. A practical approach to improving animal welfare in slaughterhouses is to use animal-based indicators to monitor handling practices. Whenever possible, integrating real-time monitoring technology can further support animal handlers in achieving the highest possible welfare standards on the day of slaughter. (D.L. Schrøder-Petersen, S. Støier, C. Hansen. 2025. The benefits and societal importance of pig welfare in slaughterhouses a narrative review. Meat Science 233, 110004.



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Dorte Schrøder-Petersen is educated as a veterinarian (1997) and has a PhD degree in ethology and epidemiology (Copenhagen University 2004). Throughout her entire professional career, she has worked with animal welfare in livestock production covering many different aspects. It has provided her with an EU-wide and global perspective and knowledge on livestock production from farm to fork. Her experience is comprehensive and ranges from working as a clinical veterinarian in a large animal practice, as an official veterinarian at slaughterhouses to a special veterinary advisor at a ministry, and finally as Head of Section for animal welfare at a Danish government-approved technology institute.