Sampling of Pork Carcasses

International Center for Food Industry Excellence (ICFIE)
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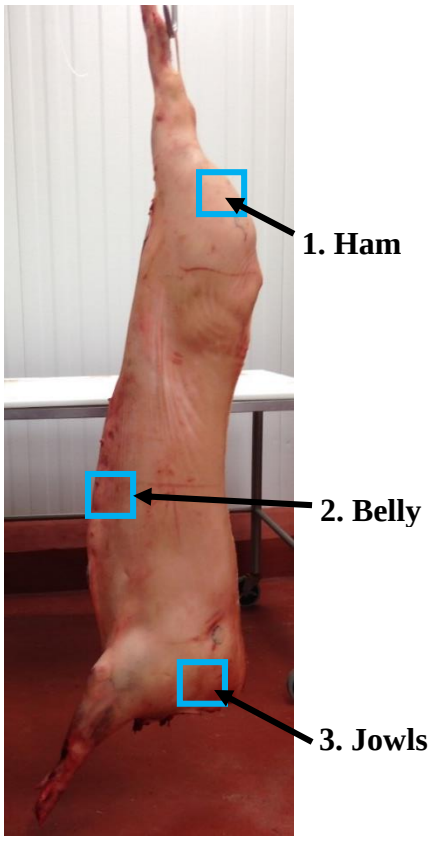
- Why?
  - Care must be taken during the harvest process to minimize microbial contamination of the carcass surface
  - Pathogens, which threaten the safety of a product, are known to reside in fecal matter, milk, and ingesta (FMI)
  - Within the U.S. FMI is prohibited on any livestock or poultry carcass after being processed (FSIS, PHIS directive 6420.2)
  - Routine carcass sampling helps monitor plant hygiene and employee dressing procedures

- How?
  - Ideally a system of routine sampling system should be determined (ex: at least 1 per week for small facilities or 1 per 1,000 head in large facilities)
  - Carcass sampling can be done using sterile sponges or swabs
  - Typically recommended to sample multiple areas to represent the carcass surface
    - → 100 cm^2 area (a sterile template can be used to ensure adequate area coverage)
    - → See figure 1 for examples of locations on a pork carcass to sample:
      - Ham
      - Belly
      - Jowls (neck)
  - Using one side of the swab, make several passes over the designated area, then turn swab over and sweep over the area in the opposite direction
  - Both sides of the sampling instrument should have passed over the entire area of the template
  - A plan should be in place to keep samples cold (≤ 40°C) until able to process



- Purpose
  - Typical carcass surface sampling would include detection of pathogens such as *Escherichia coli*, *Salmonella*, etc.
  - In the U.S. the FSIS has performance standards of *E. coli* and *Salmonella* limits on pork carcass
    - → Routine sampling is an important way to monitor this
  - Different microbiological methods are available to perform microbial analysis on samples depending on the key objectives of the facility

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