Comparison of Product Yield:
Entire and Castrate Pigs - Based on CT-scanning

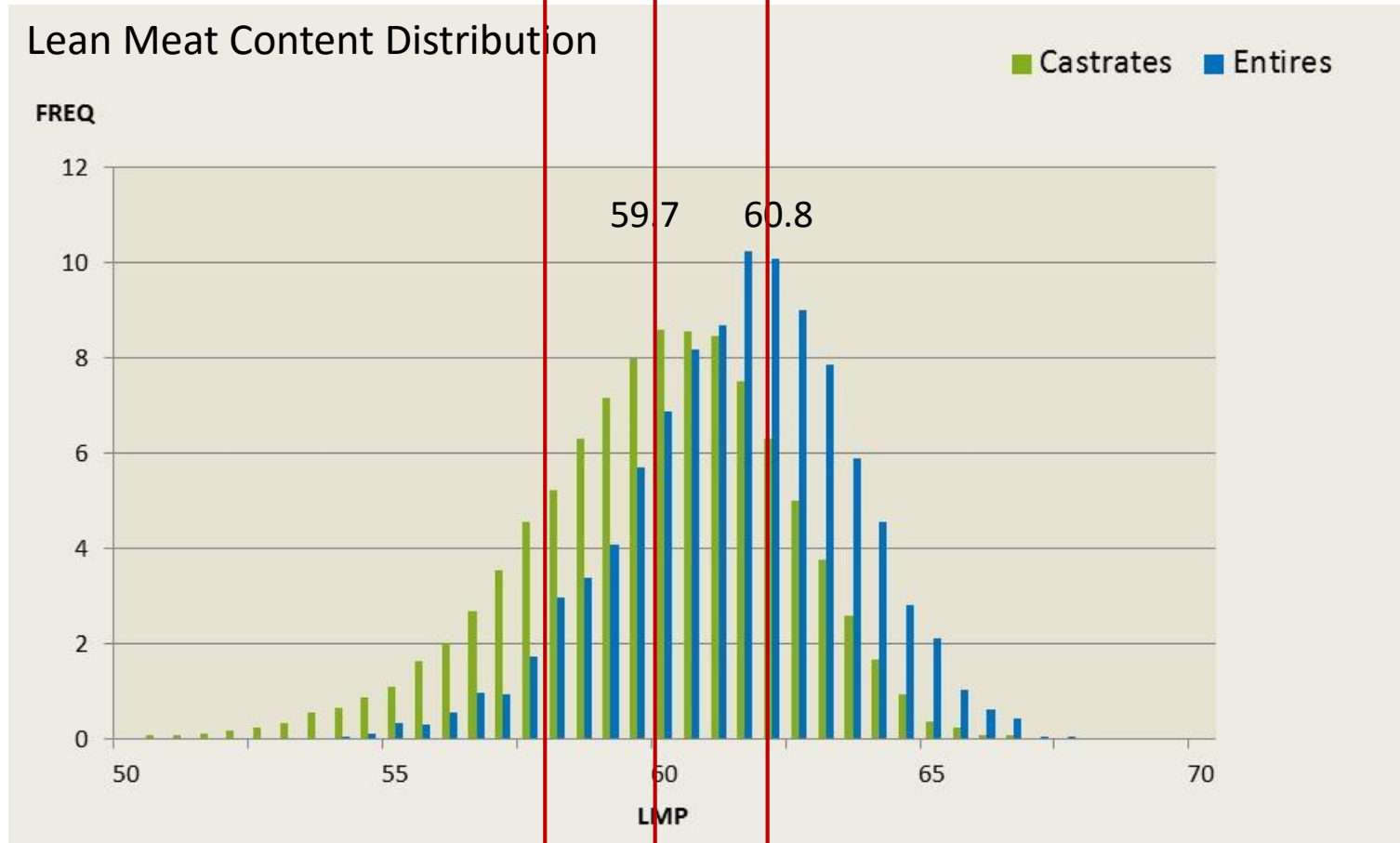Marchen Hviid

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Aim:

To compare the primal cuts yield from entire and castrates with the same lean meat content.

The yield is based on CT scanning of a half-side carcass.

Comparison of Product Yield:
- Entire and Castrate pigs – based on CT-scanning

Lean Meat Content Distribution

Castrates Entires

59.7   60.8

Materials and Methods

- 51 castrate and 51 entire boar left side carcasses were selected from our CT database to be compared.
- All the carcasses were cut virtually with the program PigClassWeb to simulate the ESS-FOOD products: 1301, 1601+1801 and 1201
- The middles were cut virtually into bacon products
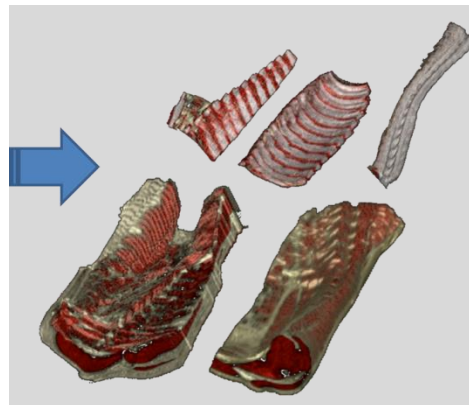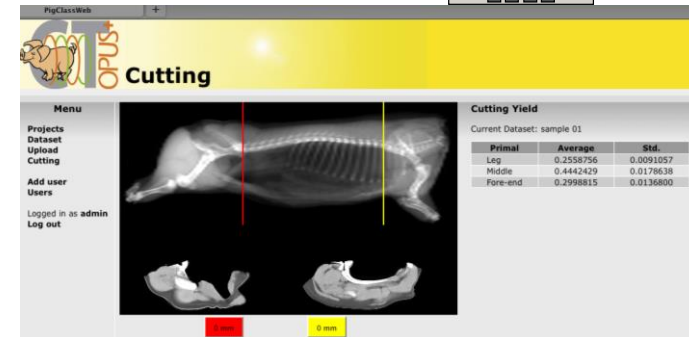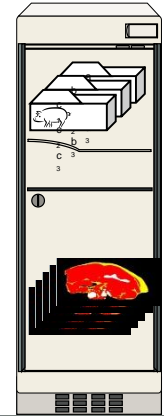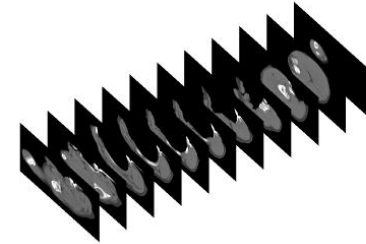
Calculate the yield

1. Estimate the weight of the virtual cuts based on volume and density!
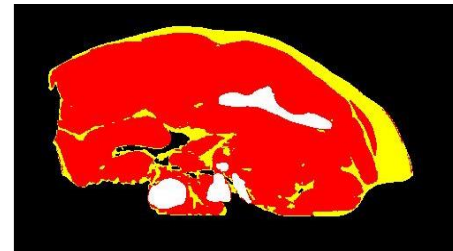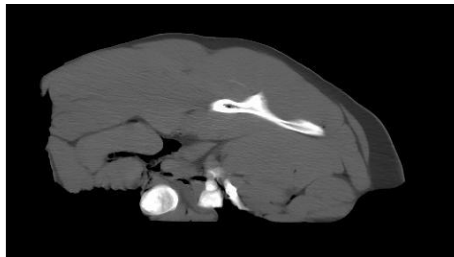
$$W_{total} = V_{fat} \cdot \beta_{fat} + V_{meat} \cdot \beta_{meat} + V_{bone} \cdot \beta_{bone}$$

W : Weight of scanned cut
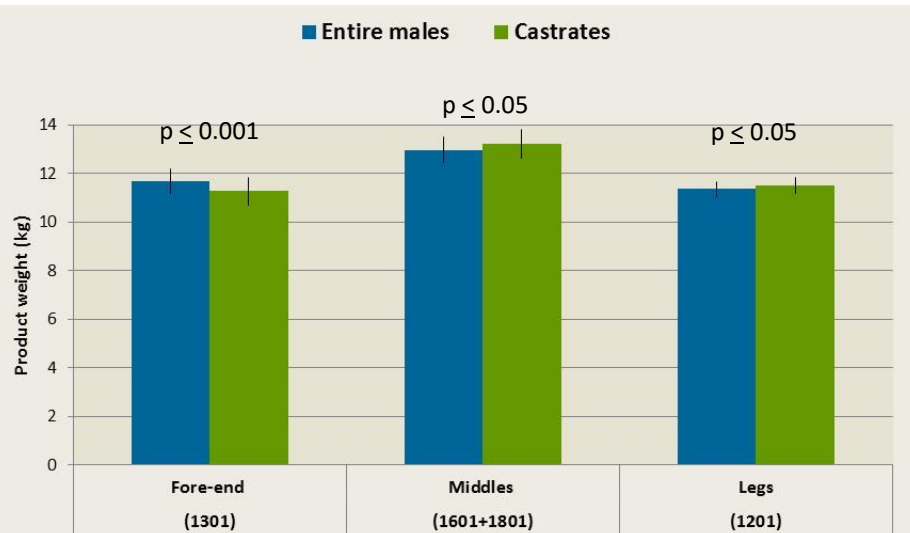
V : Tissue volume

β : Tissue "Density" constant
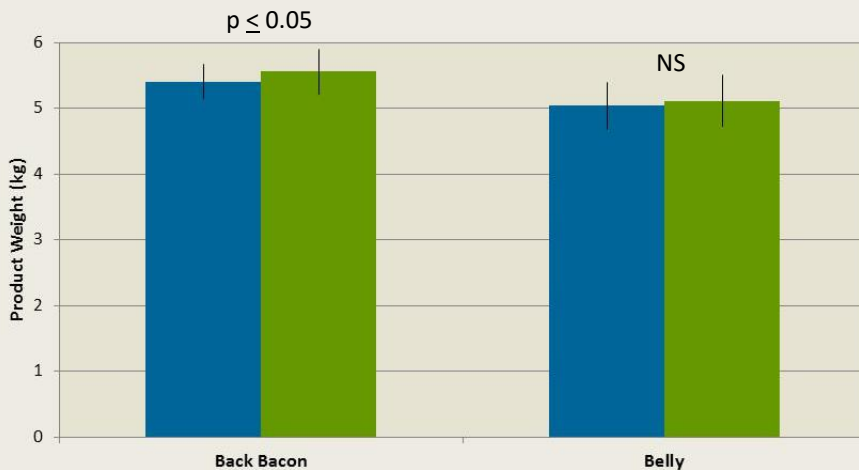
2. Then the ∑ weight of the primal cuts was normalized to 36 kg (the average of the population).

Results

The primal cuts, ESS-FOOD catalogue
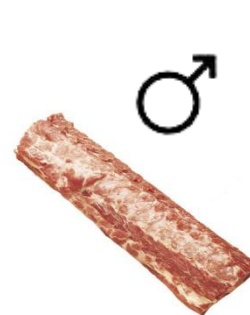
Back and Belly products

Conclusion

The test has been reproduced 11 times randomly selecting different sample groups.

✓ **Entire males have larger fore-end compare with castrates**

✓ **Entire males have smaller back/loin compare with castrate**

Thank you for attention

Poster discussion: F-11

DMRI contributions to ICoMST 2012

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