

Improving Meat Eating Quality for Beef and Sheep

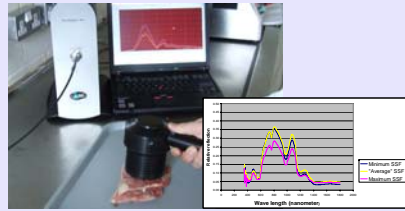
*Rainer Roehe, Elly Navajas, Dave Ross, Jimmy Hyslop,
Nuria Prieto, Kirsty McLean, Elisenda Rius,
Nicola Lambe, Lutz Bünger, Geoff Simm*

Sustainable Livestock Systems Group
Scottish Agricultural College, Edinburgh, UK

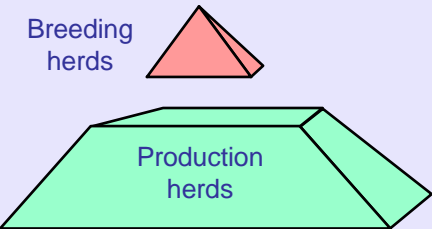
Work Package 2.5 of the Scottish Government



Livestock Genetics and Management for Product Quality and Sustainability



Strand 1
Improving product quality

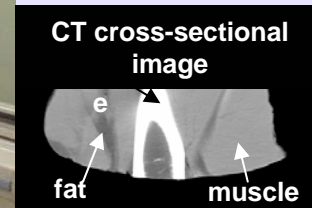
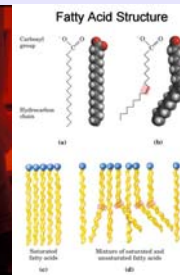
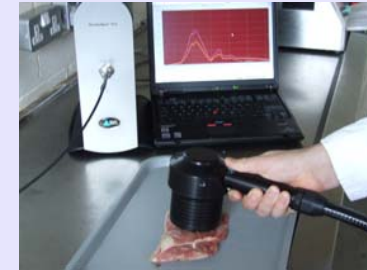
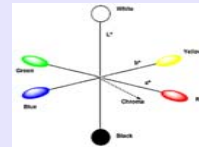
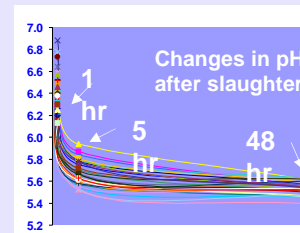
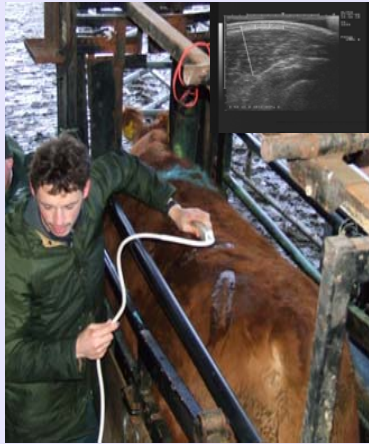


Sub-strand 1.1
Improved measurement techniques for carcass and meat eating quality in beef and lamb

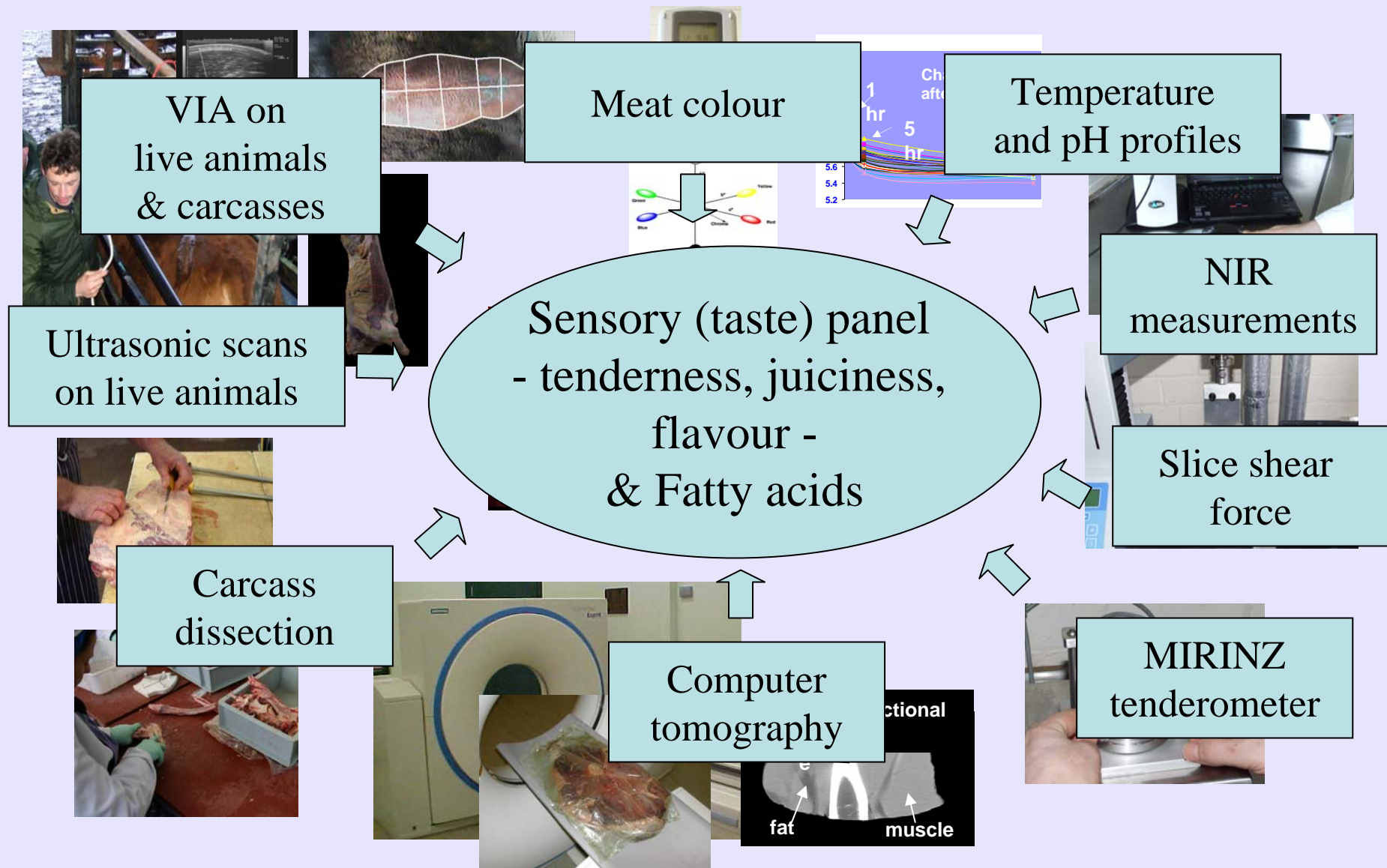
Sub-strand 1.2
Designing and testing breeding programmes to improve carcass and meat eating quality

Substantial improvement of the efficiency of Scotland's livestock farmers in an increasingly competitive food chain.

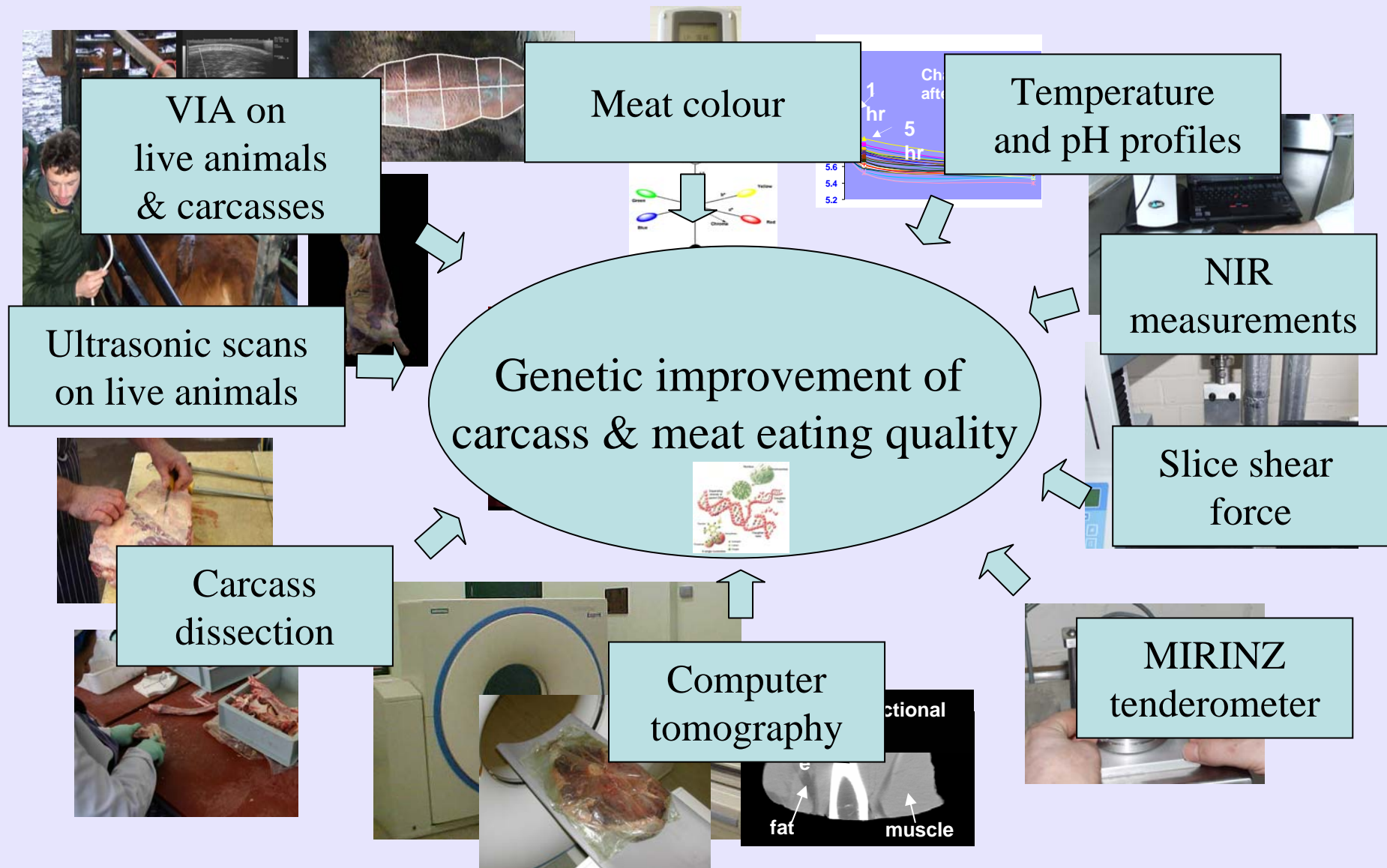
Improved Measurement Techniques used in Beef



Improved Measurement Techniques used in Beef

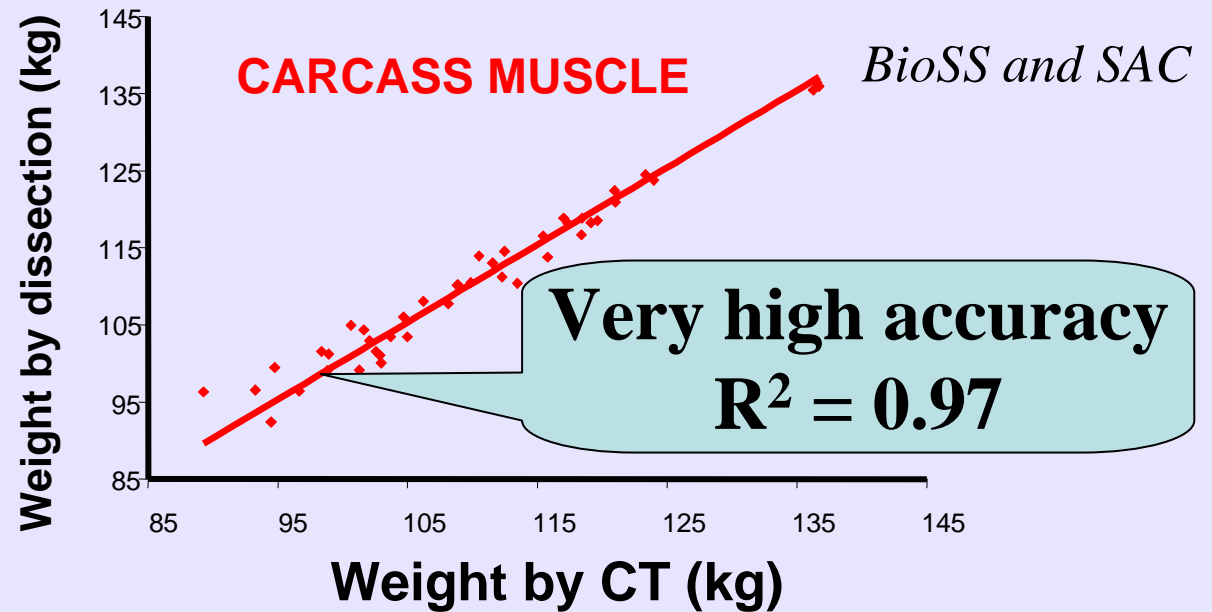
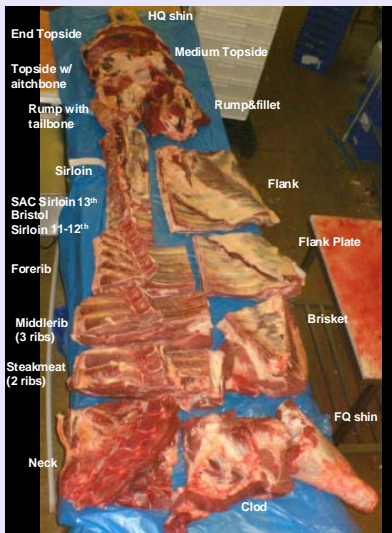
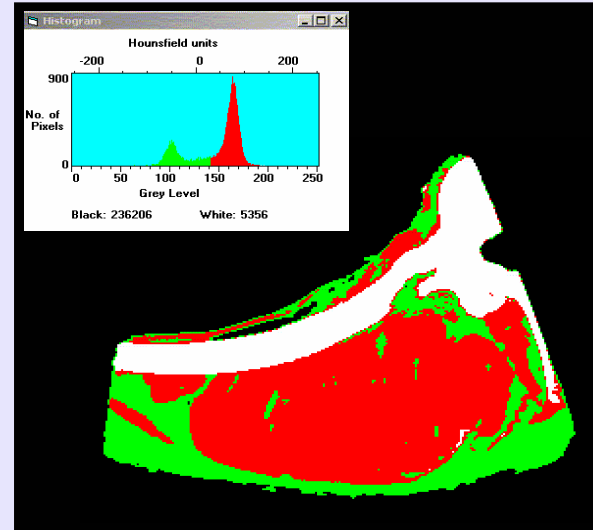


Designing and testing Breeding Programmes to improve Carcass and Meat Eating Quality in Beef



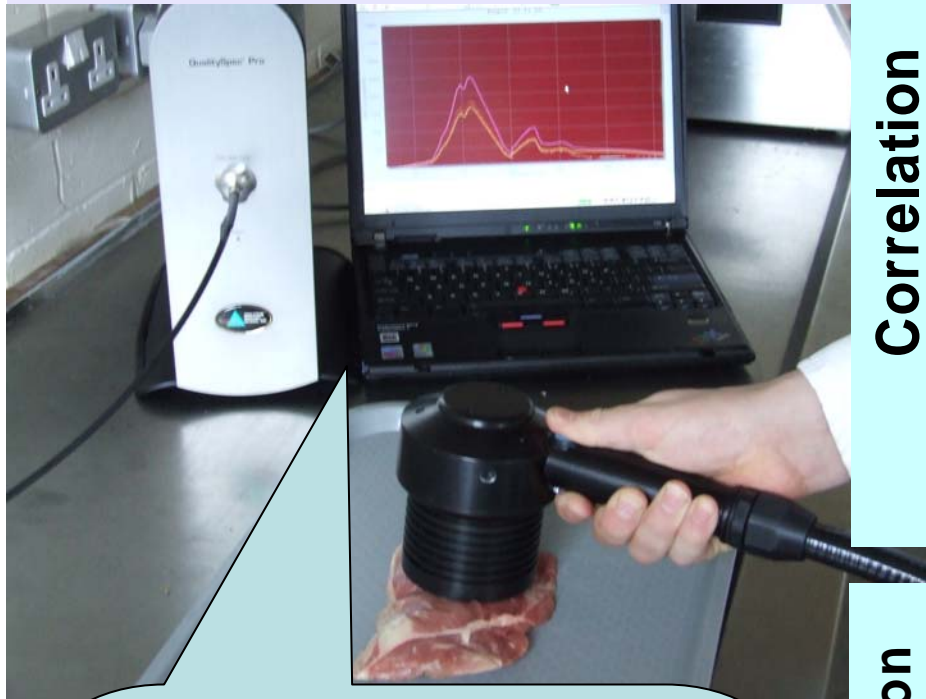
Results:

High Accuracy of Computer Tomography (CT) in Beef

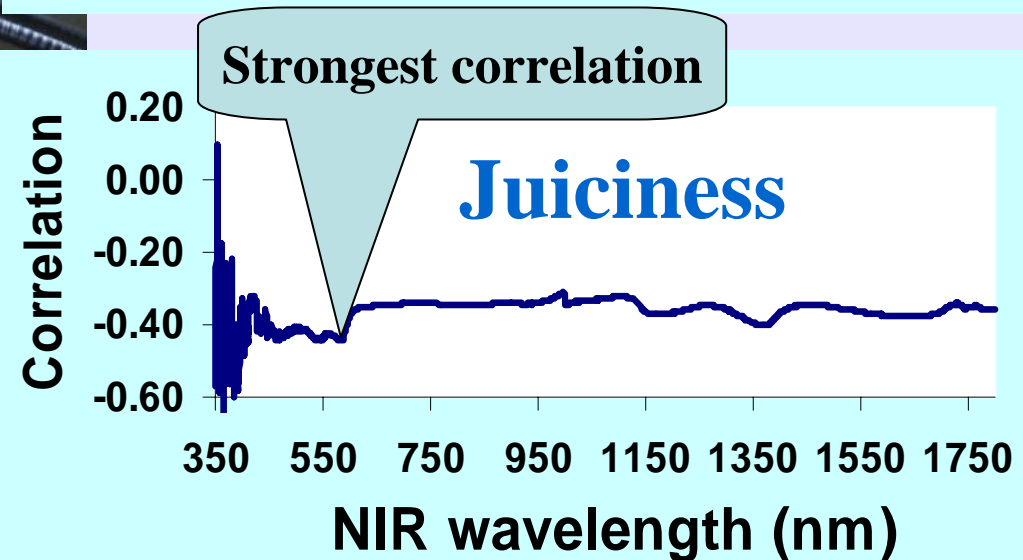
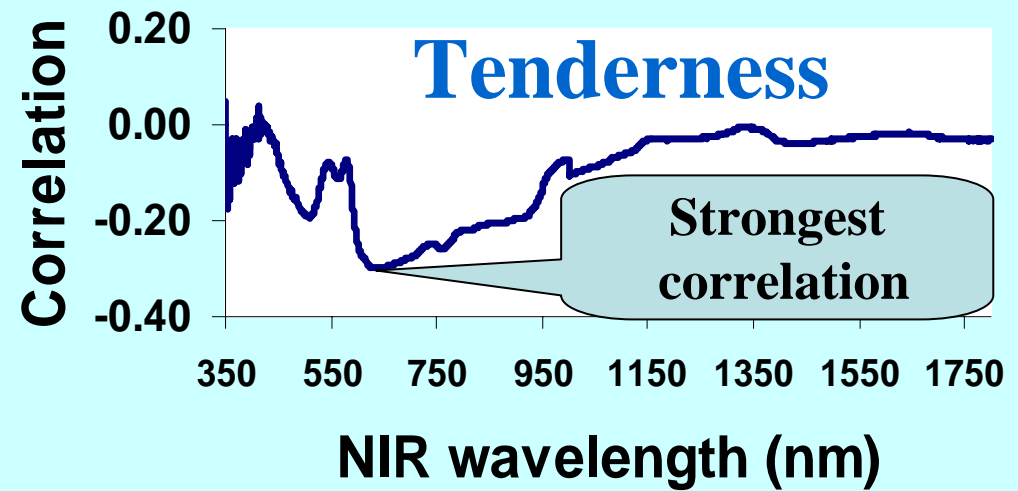


Results:

Near-Infrared (NIR) Spectroscopy in Beef



**NIR in the abattoir
used as early, fast &
cost-effective
measurement of
meat eating quality**

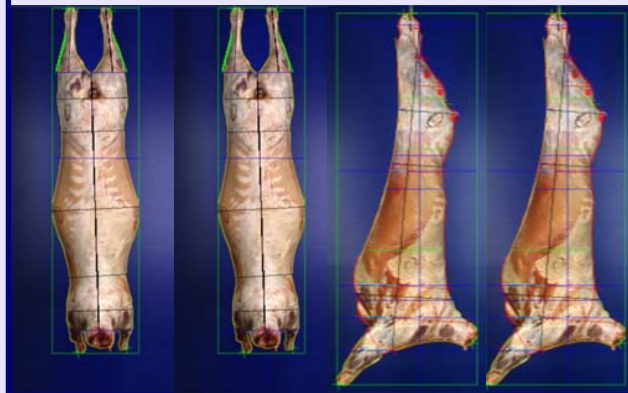


Results:

Video Image Analysis (VIA) of Lamb Carcasses



Video Image Analysis Comparison



Carcass dissection

Total primals:

**Precision
13% higher
using VIA
than using
MLC scores**

Opening cuts



Legs & Chump



Loin & Breast



Shoulders

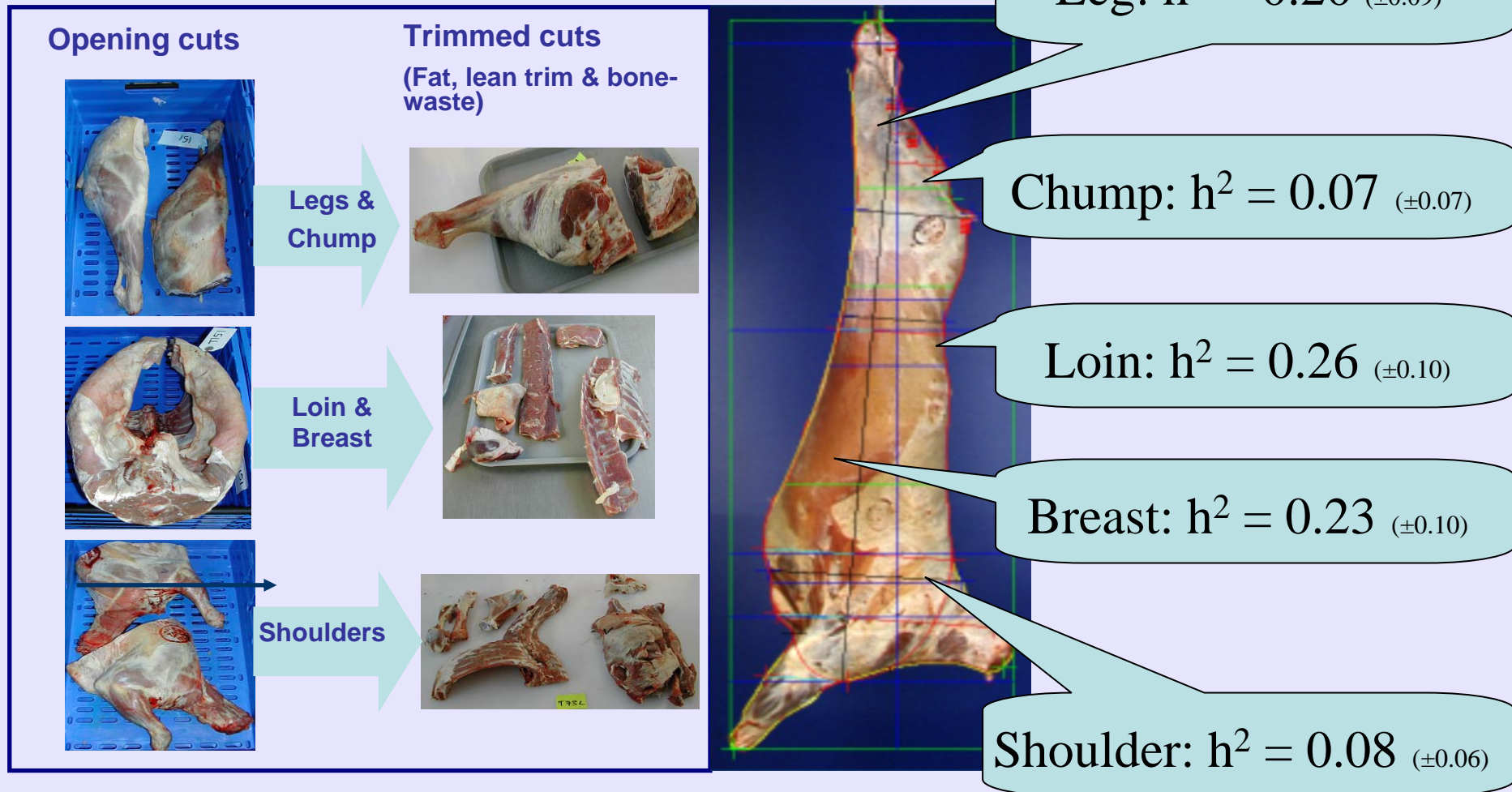


Results:

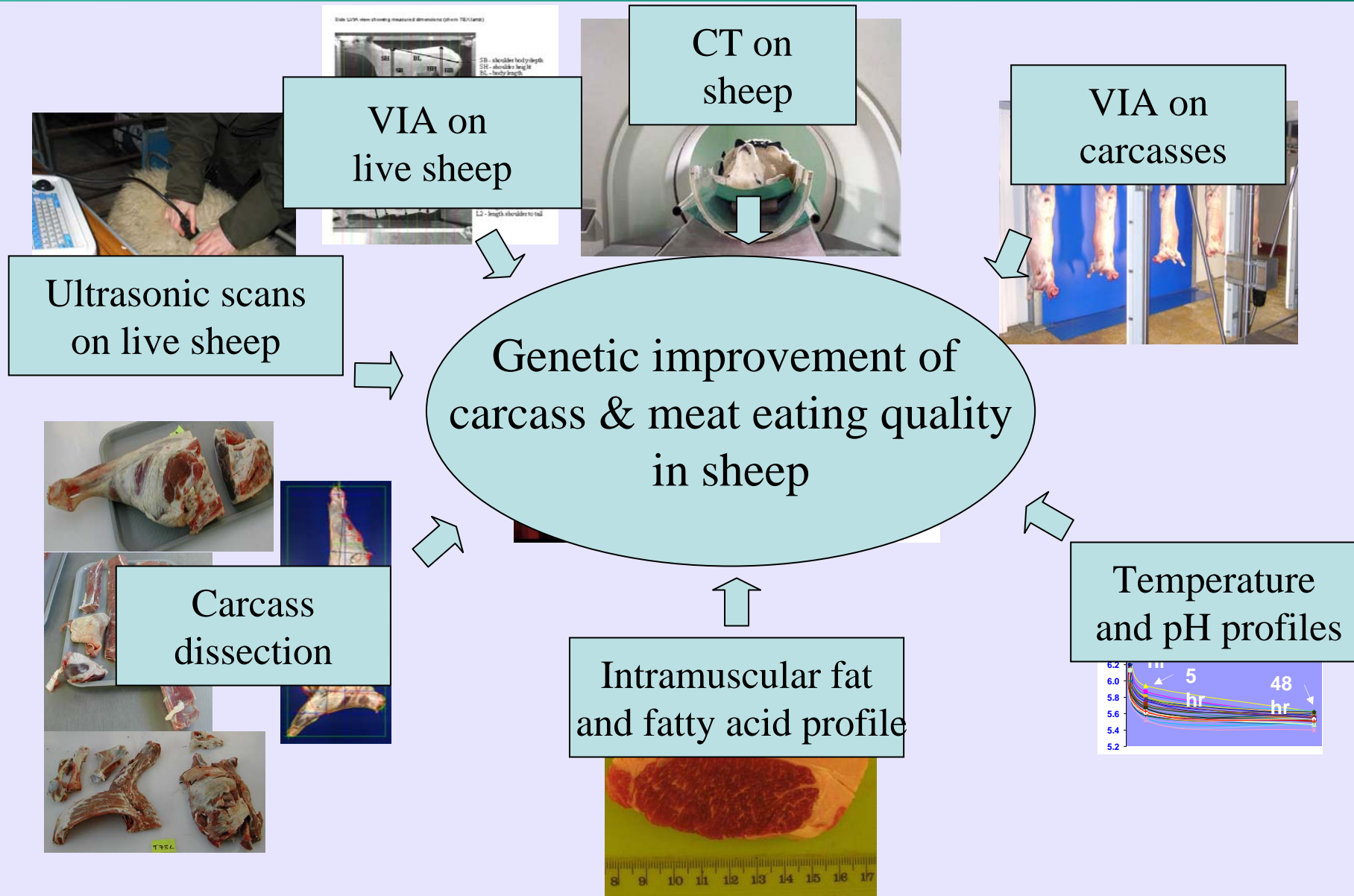
Genetic Parameters of VIA traits of Lamb Carcasses



Carcass dissection



Designing and testing Breeding Programmes to improve Carcass and Meat Eating Quality in Sheep



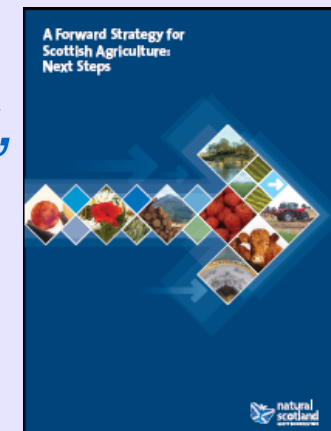
Policy Relevance



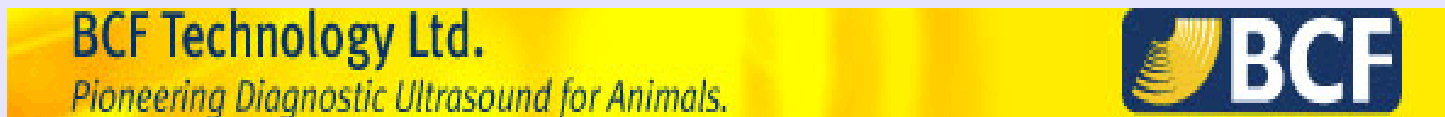
‘For the future, livestock farmers will need to adopt **practices and technologies** that enables them to **operate effectively** as the first link in an **increasingly competitive food chain**, contributing to the **production of safe, high quality food** at the **right price** and adapting to changing market signals’



Strategic Research for Environment, Biology and Agriculture 2005-2010 of the Scottish Government



Acknowledgements



Acknowledgements



The research on beef meat quality is
funded by the

Rural & Environment Research &
Analysis Directorate of the
Scottish Government



as part of Work Package 2.5

Supporting the
land-based industries
for over a century



S A C



Thank you very much!