



Opportunities for Farm Business



Leading the way in Agriculture and Rural Research, Education and Consulting

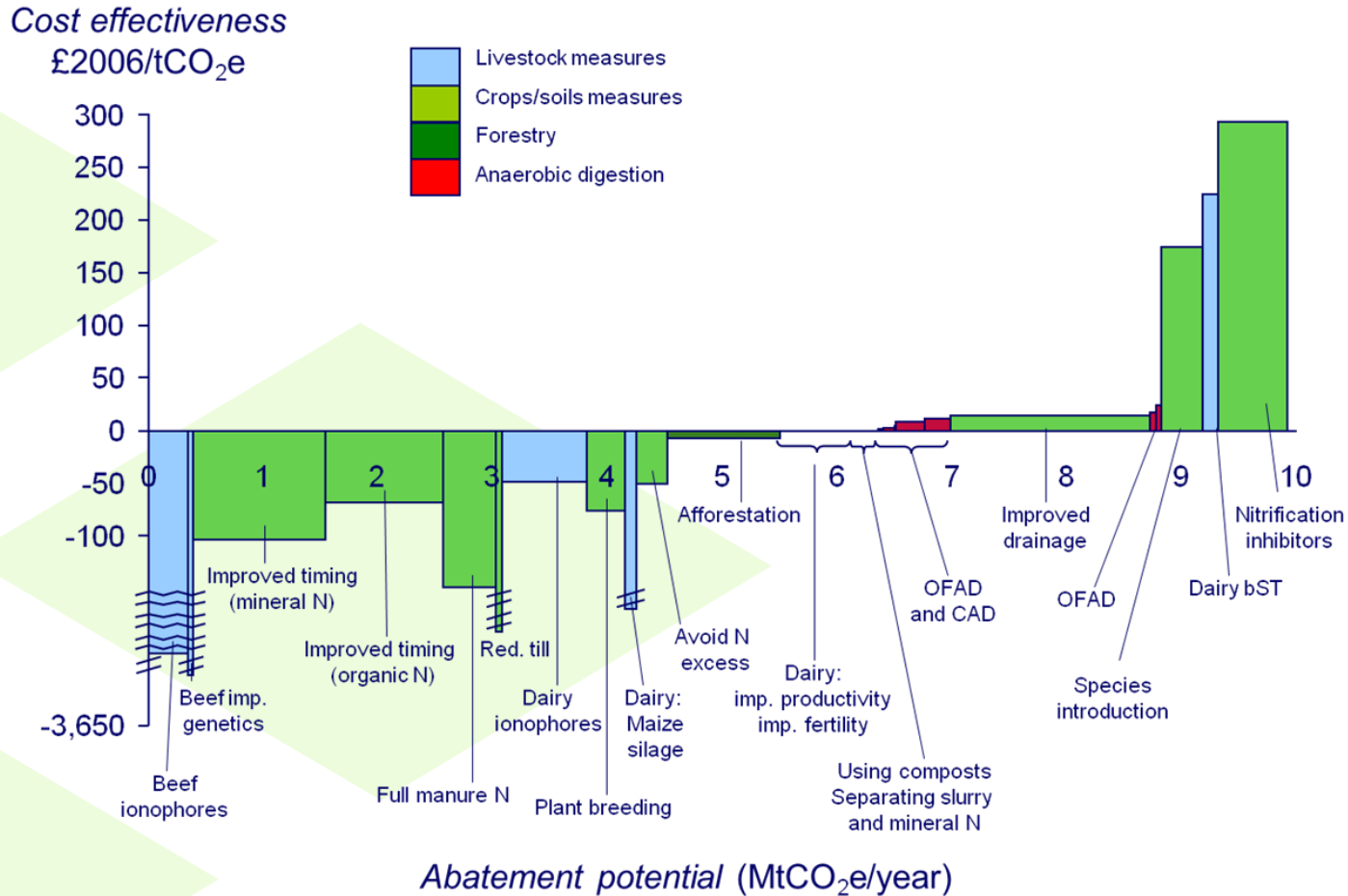
Economic approaches



- Our analysis the farm business impacts of SOC measures followed two strands:
- Cost-effectiveness analysis:
 - Simple static analysis
 - Ranks measures and crop combinations in terms of the impact on farm gross margin per tonne SOC
 - Considers yield and implementation costs
- Farm-level modelling:
 - Dynamic multi-year optimisation of gross margin
 - Three case-study regions: Aragon, Scotland and Tuscany

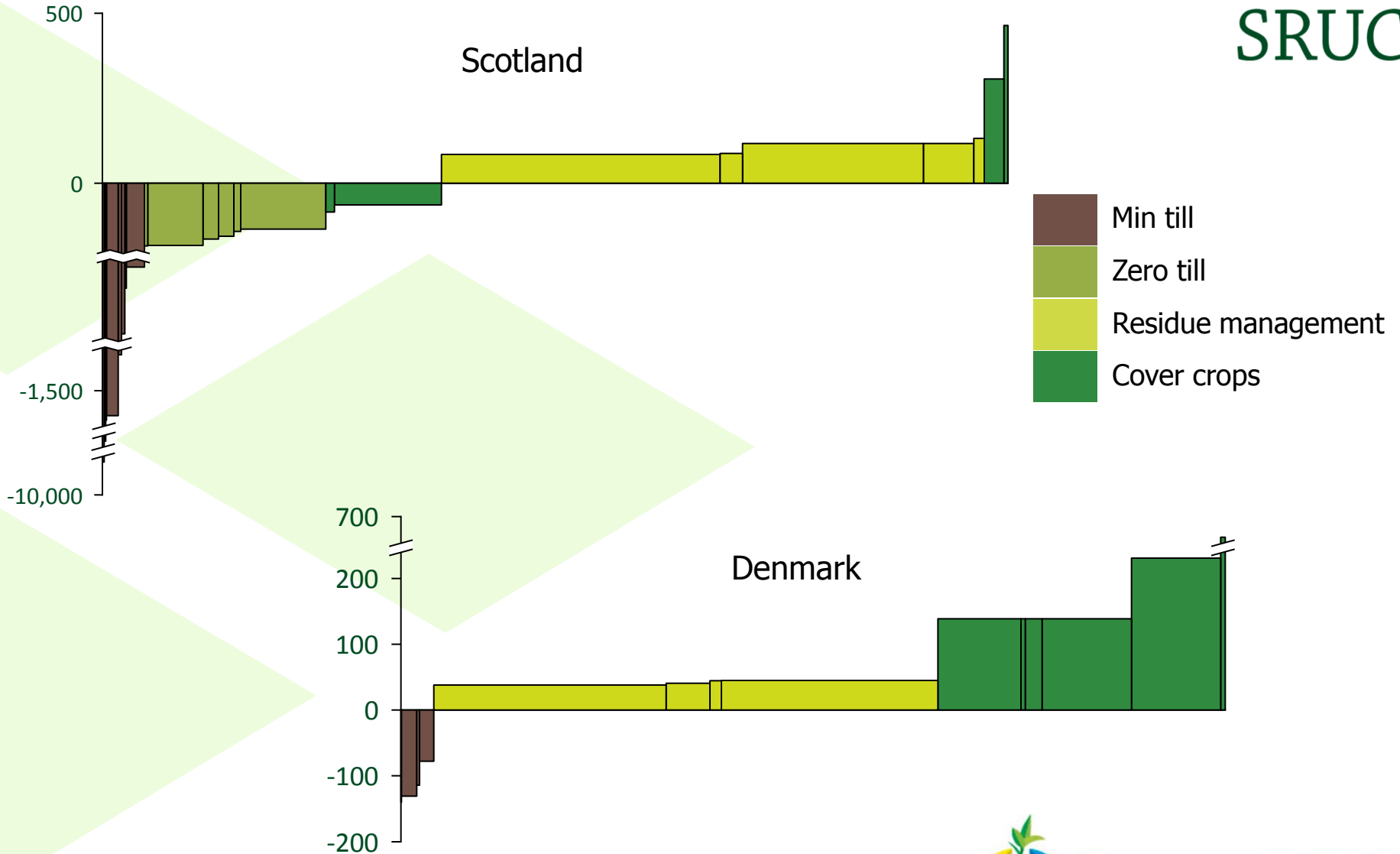


Cost-effectiveness –the ‘Agri-MACC’

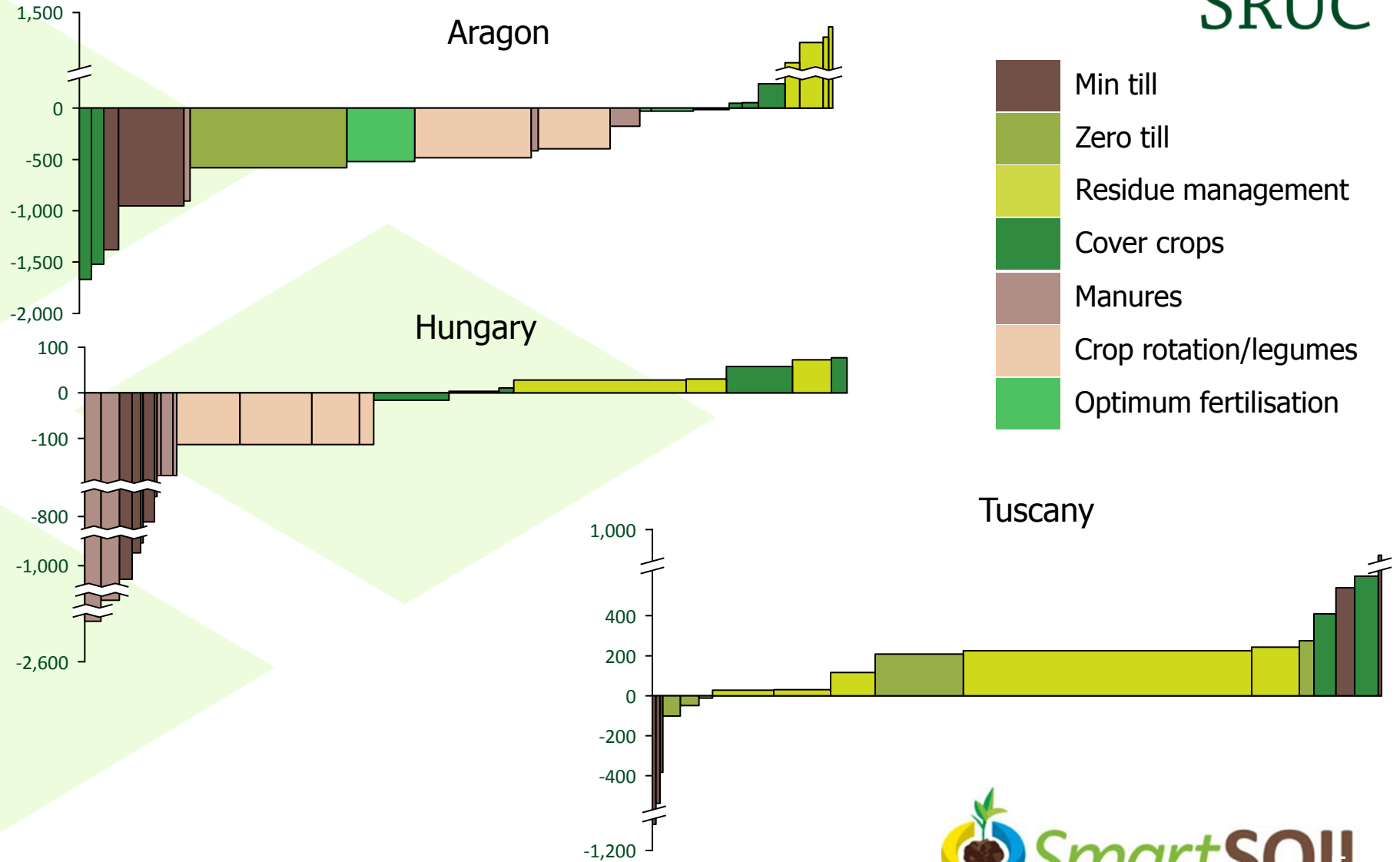


1. The total mitigation possible (width of the bars)
2. Cost-effectiveness (height of the bars)
3. The total cost/benefit (area of the bars)

Cost-effectiveness – the ‘SOC MACC’



Cost-effectiveness – the ‘SOC MACC’

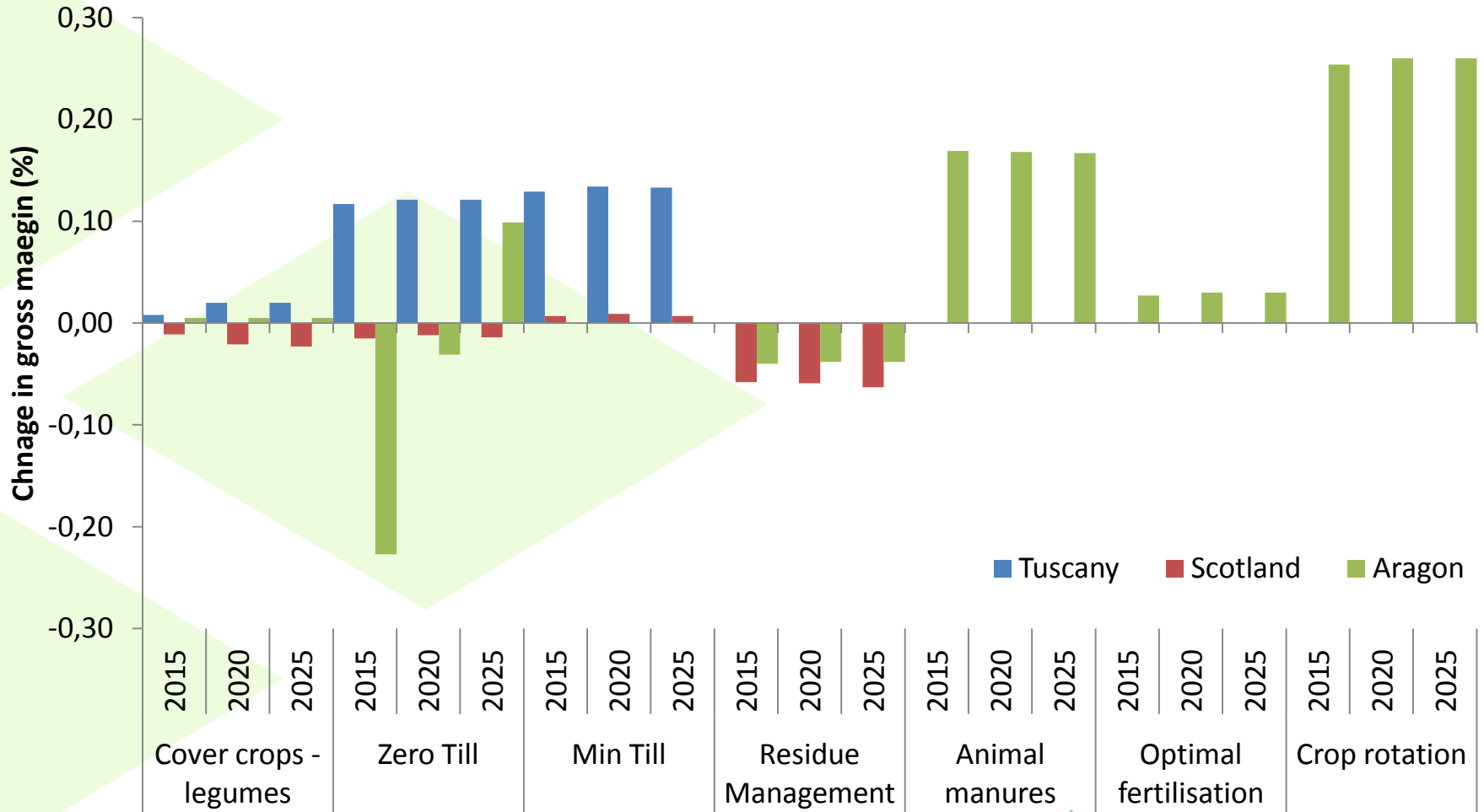


Farm level models



- More in-depth analysis of implementation including time paths to benefits
- The cost-effectiveness analysis was static and didn't consider the changing impacts of measures over time, e.g. initial reductions in yields followed by improvements in later years

Farm-level model summary



- Many measures have private benefits for farmers:
 - Possible increase in yields
 - Can reduce costs relative to ‘conventional’ management
 - Other benefits such as improved drainage, better workability may not be captured
- Public benefits:
 - Carbon sequestration
 - Water quality improvement
 - Water flow regulation
 - i.e. links to several policy areas – further incentives for uptake