

Appendix 1

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Table 1. Summary of responses: What new changes towards net zero are being implemented already? (Inside your sector)

Category	Academia	Manufacturing	Farmers & Veterinary Surgeon	C
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Farming methods

- Soil Management
 - Improving nutrients
 - Increase carbon sequestration
 - Offsetting carbon pollution through NPP
- Manure management
 - Anaerobic digestion
- Animal husbandry
 - Improving utilisation of feed
 - Improve fertility
 - Improve genetics
- Changes to procurement practices
- Regenerative farming techniques
 - No/minimal till
 - Cover crops and nitrogen fixing crops
 - Mixed rotations which include livestock
 - Nutrient management
 - Hedgerow and woodland management
- Productivity improvements
 - Animal and plant health
 - Basic knowledge exchange
 - Improved genetics
 - Energy efficiency
 - Precision farming
 - Nutrition
 - Reproduction

Energy

- Green energy
 - Closer connectivity between heating and cooling systems
 - Renewable energy
 - Changing energy grid
 - Enhanced efficiency in existing systems through energy conservation, monitoring and utilisation
- Crop breeding
 - Low energy rice and grain processing, potential for 90% energy reduction.
- Green energy
 - Removal of coal and fossil fuels
 - Renewable sources
 - Solar panels
 - Electric vehicles
- Energy use reduction
- Green energy
 - Through anaerobic digestion
 - On-site renewable sources

Farming inputs

- Integrated pest management (IPM)
- Targeted pesticide and agrochemical use.

- Alterations to fertiliser practises
 - Move from inorganic to organic fertilisers
 - Abated fertiliser due to supply in the UK
 - Reduced reliance on ammonium nitrate fertiliser

Land use

- Environmental Land Management (ELM)
- Trials associated with soil carbon

- Integrated Pest Management (IPM)
- Reduced reliance of Plant Protection Product (PPP)

- Land use change
- Planting woody biomass

Consumer diet change

- Protein self sufficiency
- Use of alternatives to imported protein sources.

Waste

- Food waste reduction
- Waste reduction and management
 - Zero waste to landfill
- Water recycling and reduction.

Packaging

- Food packaging material and weight changes.

- Packaging materials
 - Net impact is negative as packaging protects and preserves products through the supply chain and the product loss that it prevents has a greater Greenhouse Gas (GHG) footprint than packaging itself.
 - Media and Corporate Social Responsibility (CSR) driven reduction of packaging (particularly substitution of plastics packaging by alternative materials) will increase GHG impact and must "follow the science" not rhetoric.
 - Including recycled content into primary food

Measurement

- Measuring of parameters
- Complete carbon footprints on-farm

Manufacturing

- Improved manufacturing efficiency
- Reduce rejection and reduce rework and achieve zero waste
- Deforestation policies among manufacturers

Technology

- Innovation
- Increased use of high-tech production systems (glasshouses, Controlled Environment Agriculture (CEA), hydroponics)

Transport

**Processing
methods**

Shelf-life

Retail