

Appendix 3

In this guide

[In this guide](#)

- 1. [Online Survey Responses](#)
- 2. [Appendix 1](#)
- 3. [Appendix 2](#)
- 4. [Appendix 3](#)
- 5. [Appendix 4](#)
- 6. [Appendix 5](#)
- 7. [Appendix 6](#)
- 8. [Appendix 7](#)
- 9. [Appendix 8](#)
- 10. [Appendix 9](#)

Table 3. Summary of responses: Are there other changes (at any stage of development) aimed at achieving net zero that you expect to make an impact? What are they?

Category	Academia	Manufacturing	Farmers & veterinary surgeon	Other
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**Farming
methods**

- Gene editing
- For crop and livestock resilience
- Livestock and rumen microbes as part of the pangenome approach
- Land use
- Balance between for agriculture and for carbon storage
- Supply shed natural climate solutions
- Novel carbon-storing soil amendments (biochar, enhanced rock weathering)
- Alternative to the Haber-bosch process
- Controlled environment farming (CEF)

Energy

- Green energy
 - Bioenergy with carbon capture and storage - not in the food system, but uses land so will affect the food system
 - Replace water heated, jacketed pipework with lower energy electrical systems
 - Solar powered thermally efficient systems working at the 50-95 degree Celsius range.
 - Energy reduction
- Green energy
 - Governmental support for the development of new sustainable energy technologies to replace hydrocarbon use
 - Clean hydrogen instead of methane as a gas supply.
 - Fusion
- Green energy
 - Electrification
 - Decarbonisation of crop systems grown in tunnels
 - Hydrogen economy investment by government
 - Carbon capture for soil sequestration

- Government investme
- Adoption National I Strategy

Government

Transport

- Shorter supply chains
- Reduced car use post Covid; reduced flying.

- Move to predominantly sea freighted / road transported imported produce away from Air freight.

- Vehicle electrifica

Consumer diet change

- Public attitude and education, cultured meat expansion and acceptance and fermented meat substitutes expansion and acceptance.

- Reducing import of animal protein from high Greenhouse Gas (GHG) emission intensity systems
- 'Quality not quantity' changes in consumer eating habits.

- Consumer being par solution
- Novel foo
- Alternativ protein production

- Conversion
reduction
food waste
- Into 'ferti'
at scale
- Valorisati
side strea
- Reducing
waste
- Recycling
polypropy

Waste

- Development
of circular
economy
principles to
utilise waste
streams

Packaging

- Bio-based
materials in
long-lived
consumer and
construction
products

Measurement

- Better
diagnostics and
analytical
approaches
- Measuring
baselines on
farm
- Measure
and moni
of Greenh
Gas (GHG
emissions
environm
performa

Technology

- Robotics, Information and Communication Technology (ICT) developments on farm and in factory environment (Industry 4.0).