

# Appendix 1 - Complete list of 41 activities

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1. Changed fertilizer practices including new formulations and more organic systems of production
  2. New crop and plant varieties produced by conventional and new breeding methodologies
  3. Less chemical options for pest control and moves to more Integrated Pest Management
  4. Changes to cultivation methods - reduced tillage
  5. Changed rotations and crop mixtures
  6. Policy changes to increase on-farm biodiversity and carbon sequestration
  7. Development of circular economy principles to utilise waste streams
  8. Reduction of inputs (e.g. water, biocides) that affect food safety
  9. Improving nutrient management
  10. Protection of peatlands and increased carbon sequestration
  11. Encouragement to protect soil biodiversity
  12. Increased use of agroforestry, cover and nitrogen fixing crops
  13. Mixed rotations which include livestock
  14. More hedgerows, woodland and forests
  15. Investments in Anaerobic Digester plants
  16. Land use change; Balance between for agriculture and for carbon storage
    1. a. Planting woody biomass (for energy production / Biochar)

- 2. b. Restoration of peatlands
- 3. c. Agroforestry
- 17. Mixed rotations including livestock
- 18. Greater integration of arable and livestock farming
- 19. Multi-stream culture systems (e.g., fish plus water plants such as watercress)
- 20. Ocean farming and harvesting of seaweed
- 21. Novel animal feed; insect protein, soy replacement, new proteins
- 22. Insect feed in aquaculture
- 23. Supplements for livestock to reduce methane
- 24. Livestock and rumen microbes as part of the pangenome approach
- 25. Livestock breeding (traditional and/or GE and/or GM) for more sustainable traits
- 26. Bio based and other novel packaging and food contact materials
- 27. Reduced plastic packaging
- 28. Conversion of and reuse of food waste
- 29. Abstraction of slurry (to allow use of low emission slurry spreading machines)
- 30. Manure management; anaerobic digestion
- 31. More plant-based diets
- 32. Novel proteins in consumer diet; insects, cultured meat, meat and dairy substitutes
- 33. Decarbonisation of crops grown in polytunnels
- 34. Vertical Farming systems
- 35. Robots and drones used in farming systems
- 36. Animal and plant health Sustainable intensification - Lower carbon agronomy
  - 1. a. Intensive indoor dairy and livestock systems
  - 2. b. Intensive plant growing systems
- 37. high-tech production systems (glasshouses, Controlled Environment Agriculture (CEA), hydroponics)
- 38. Reduced water uses
  - 1. a. Recycled water
  - 2. b. Reduced washing
- 39. Energy use reduction measures
- 40. Land-based renewables and energy storage, for on-farm and export
- 41. Bioenergy with carbon capture and storage - not in the food system, but uses land so will affect the food system