



Research partnerships and collaborations helping to address the sustainable development goals

Below are examples demonstrating our response to Target 2.4:

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

Exeter research has been at the forefront of researching resilient agricultural practices in the UK. Working small to medium size UK family farms has shown that many 'hard to reach' farm businesses struggle with business management, social isolation, and business succession planning. In 2018/19, 20% of UK farm businesses failed to make a positive Farm Business Income with a sub-group of these farmers suffering from serious debt. These insights, and their corresponding recommendations, led to the launch of the Prince's Farm Resilience Programme with an annual investment of ~ £0.5m since 2016. Provided by the Prince's Countryside Fund, the programme has delivered business training and network building which has impacted over 3000 family businesses, improving farm resilience and creating support networks. The scheme has been commended by the UK's Department for Environment, Food and Rural Affairs (Defra) for its transformative effect on harder to reach businesses. In November 2020 Defra committed to its own £9m Future Farming Resilience Fund inspired by the Prince's Farm Resilience Programme and this will be a central feature of post-Brexit agricultural policy up until 2024.

In addition, Exeter research is building knowledge and understanding and helping to shape conservation and species management for the future. Some recent examples include transformational outcomes to address the threat which the decline of bee pollinator populations pose to global food production and to insect and plant diversity. Research on bee pollinators' sensitivity to certain pesticides and tolerance to others has been translated into tools (the BeeSafe toolkit) which have been used by Bayer, a world-leading agrochemical company, to: rapidly screen for and accelerate the development of new insecticides that have low toxicity to bees; predict and avoid harmful pesticide-pesticide interactions; and support registration of specific pesticide combinations that are safe for bees. The BeeSafe toolkit was integral to Bayer receiving regulatory approval for a new insecticide in Germany with benefits to pollinators and production.