Enhancing the sustainability and improving quality of apple production through ecosystem service management

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Project Description: One of the main sustainability challenges faced by farmers today is effectively managing crop pests. This is a particular problem for fruit production where new and emerging pests are presenting a particular challenge for growers. Sustainable solutions are being sought including making better use of wild natural enemies and insect pollinators to improve crop yield and quality and increase output and profit for growers. Natural enemies and wild pollinators, such as bees and hoverflies, however require habitats which are not always common in intensive agricultural landscapes. We need new and effective ways of managing farms and landscapes to provide habitats to support biodiversity and the ecosystem services it provides.

The aim of this project is to understand what benefits flower margins established in apple orchards can provide in terms of boosting beneficial insects and improving crop. The project is a collaboration between the University of Reading, Cranfield University, NIAB EMR and Syngenta as well as working closely with the UK apple industry to carryout state of the art research to address an industry relevant challenge. This study will involve working in a network of apple orchards in Kent UK where habitats have been created to support pollinators and natural enemies. Work will involve biodiversity surveys, crop assessments and cost-benefit analysis to understand the potential value of habitat creation to the UK top-fruit industry and help develop tools to support sustainable crop production.

This project will provide the opportunity to work in a leading agro ecology research group studying sustainable food production. It will also provide excellent experience working with a number of applied research institutions as well as industry partners giving excellent academic and industrial experience.