

Positive plastics: biodegradable plastic mulch films for enhanced crop production and environmental benefits

Supervisory team:

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Host institution: Rothamsted Research (Harpenden)

Project description:

Biodegradable plastic mulch film is used to accelerate and protect emergent high value and long season crops in-field to improve product yield and quality. However, scarce consideration is currently given to the chemical properties of the plastic beyond its broad biodegradability properties. This project will explore a unique opportunity to exploit the potential to deliver additional benefits to the crop and environment through the manipulation of the chemical formulation of biodegradable plastic films for the enhancement of soil quality and crop nutrition, which are two of the greatest challenges facing modern day agriculture. Through working with a combination of research expertise at Rothamsted Research and Bristol University, training in advanced laboratory techniques, controlled environment studies and field trials will be provided, meaning the student will acquire a wide range of skills and technical expertise in soil science, but also within other areas of scientific research or non-academic career paths. The student will also have the opportunity to participate in a start-up company related to this project which is being established by the Rothamsted researchers. This will provide an opportunity to experience and develop valuable entrepreneurial skills.