

## Optimizing Polyacrylamide (PAM) spray application to mitigate the effect of soil splash and capping on high value horticultural crops

PhD studentship in Environmental Science for June 2018 entry

Deadline for applications is **14<sup>th</sup> of July 2018**.

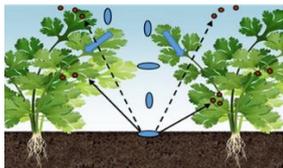
Supervisor: Dr Lynda Deeks (Cranfield University), Co-Supervisor: Dr. Rob Simmons (Cranfield University)



This project offers an opportunity to work closely with leading UK salad and herb growers as well as world leading Polyacrylamide manufacturer SNF, and is relevant to an applicant interested in technical and engineering innovation, an integral component of this project recognised through the co-sponsorship of the Douglas Bomford Trust. Based at Cranfield University, the project also has access to world leading research facilities through Agri-EPI and CHAP centre.



The project will address two key challenges facing the horticultural sector are micro-contamination of baby leaf salads and field herbs and poor stand establishment of small seeded crops due to capping of the soil surface. Contamination of baby leafy salads and field grown herbs with soil and/or pathogenic micro-organisms can result in a significant cost to the industry due to analysis costs, product wastage, delayed marketing (reduced shelf-life), supply restrictions, additional hygiene requirements and customer concerns. Capping can impede seedling emergence, delay stand establishment and reduce plant populations, which impacts the quantity and quality of the final yield.



This project will provide an opportunity for the student to engage directly with multiple businesses enhance their technical, communication and practical experience, as well as academic rigour, through an investigation of:

- Optimum application rates and PAM formulations to prevent capping and mitigate soil splash on a range of crust susceptible soils,
- Seedling emergence and splash contamination trials,
- Design and development of a PAM sprayer that can be readily retro-fitted to the back of a range of seed drills, and
- Field trial assessment of optimal PAM formulations and application rates.

This is a **fully funded studentship** co-funded by Cranfield, SNF and Douglas Bomford Trust with **£18,000 per annum** stipend (tax free), fees covered and an £18.5k research consumables and travel budget. For more information and to apply, please follow this link:

<https://www.cranfield.ac.uk/research/phd/optimizing-pam-spray-application-to-mitigate-soil-splash-and-capping>

Applicants should hold a first or 2:1 level or equivalent in subjects such as Agriculture, Environmental Science, Geography or Natural Sciences. Experience in soil science or plant measurements is desirable.

For informal enquiries please contact Dr Lynda Deeks [l.k.deeks@cranfield.ac.uk](mailto:l.k.deeks@cranfield.ac.uk) or Dr Rob Simmons [r.w.simmons@cranfield.ac.uk](mailto:r.w.simmons@cranfield.ac.uk)