Optimizing yield and flavour consistency of rocket greens

PhD Studentship for October 2020
Academic supervisor: Dr Marjorie Lundgren, Lancaster University
Industry supervisor: Dean James, Bakkavor

Perennial wall rocket (Diplotaxis tenuifolia; Brassicaceae) is becoming an increasingly important food crop for its high nutrient content, ease of use in ready-made salads, and environmentally friendly perennial life history strategy. Rocket uses a rare and poorly understood type of physiology called C2 photosynthesis. Plants that use C2 photosynthesis are efficient under warm, dry, and bright environments- but are also fairly plastic and should be able to shift physiologies to maintain efficiency under different growth conditions. This physiological flexibility may impact yield and flavour consistency.

This CTP includes fieldwork in the UK and Europe and an industry placement with Bakkavor. The student will assess physiology, leaf anatomy, yield, and flavour profiles in different rocket varieties and under diverse growing conditions. The studentship will ultimately identify the rocket varieties and environmental conditions that maximize yield and flavour consistency, to improve the sustainability and consumer attractiveness of this important crop.

What is the CTP?
This funded project forms part of the Waitrose Collaborative Training Partnership (CTP) between the Waitrose Partnership, their international food production and supply companies, Lancaster University, University of Reading, University of Warwick and Rothamsted Research. The CTP will deliver studentships on the themes of sustainable crop production, sustainable soil and water and biodiversity and ecosystem services in agriculture. This project is based at Lancaster University

Who should Apply?
Applicants should hold a minimum of a UK Honours Degree at First-class or 2.1 (Hons) degree or Masters degree (or equivalent) in biology, ecology or plant sciences is required.

Funding
Full studentships (UK/EU tuition fees and stipend (£15,009 2019/2020 tax-free) for 4 years for UK/EU students subject to eligibility criteria. Unfortunately, studentships are not available to non-UK/EU applicants.
A student must have:
- Settled status in the UK, meaning they have no restrictions on how long they can stay
And
• Been ‘ordinarily resident’ in the UK for 3 years prior to the start of the grant. This means they must have been normally residing in the UK (apart from temporary or occasional absences)

And

• Not been residing in the UK wholly or mainly for the purpose of full-time education. (This does not apply to UK or EU nationals).

For further information please Dr Marjorie Lundgren at m.lundgren@lancaster.ac.uk or for application queries contact Roz Wareing, r.wareing@lancaster.ac.uk. Visit the Waitrose CTP Website http://wp.lancs.ac.uk/sustainable-agriculture/training/

How to apply

Follow the instructions on How to apply of the Waitrose CTP website http://wp.lancs.ac.uk/sustainable-agriculture/training/how-to-apply/

Send all applications to this unique email address as per the instructions on the How to apply webpage above

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Deadline 17th February 2020 Midday