

## TEAGASC PHD WALSH SCHOLARSHIP OPPORTUNITY

### “Modelling farm level gaseous emissions at higher resolution”

Walsh Scholarships Ref Number 2021059

#### Background

This scholarship aims to provide greater insight into two areas that significantly impact agricultural greenhouse gas emissions in Ireland. Firstly, this research aims to use higher resolution activity data and locally applicable emission factors to generate more locally refined GHG emissions estimates around the use of chemical fertiliser in agricultural production. This will provide greater insight into the cohort of farms (based on management and biophysical characteristics) where higher GHG emissions are generated from chemical fertiliser applications and identify where mitigation measures can be best targeted based on cost-efficacy criteria. Secondly, landowners willingness to engage with farm level actions that promote carbon sequestration will be explored as will the impact of these actions at a more local scale in terms of greenhouse gas emissions abatement. The adoption of land use change based mitigation measures will again be modelled across different farming cohorts (accounting for management factors and biophysical conditions) to explore targeting of carbon sequestration based mitigation measures based on cost-efficacy criteria.

#### Requirements

- Strong honours degree (minimum 2.1) in an appropriate discipline (e.g. Economics, Agriculture, or Environmental Science). A masters degree in an appropriate discipline would be a distinct advantage.
- Strong quantitative skills
- Good communication skills, both written and verbal
- English language (where English is not the first language)

#### Award

The Ph.D. scholarship is a joint research project between Teagasc, Rural Economy and Development Programme, Athenry Co. Galway and the School of Agriculture & Food Science in University College Dublin. The student will be work under the supervision of Dr. James Breen (UCD) and Dr. Cathal Buckley (Teagasc) and will be required to undertake coursework during years 1 and 2. The successful candidate will be located jointly between the Teagasc, Rural Economy and Development Programme, Athenry Co. Galway and the School of Agriculture & Food Science in University College Dublin.

The scholarship funding is €24,000 per annum and includes University fees of up to a maximum of €6,000 per annum and is tenable for 4 years.

#### Further Information/Applications

Dr. James Breen, School of Agriculture & Food Science in University College Dublin, Belfield, Dublin 4.  
Phone +353 (0)1 7167764      Email: [james.breen@ucd.ie](mailto:james.breen@ucd.ie)

Dr. Cathal Buckley, Rural Economy and Development Programme, Teagasc, Athenry, Co. Galway.  
Phone +353 (0)91 845 294      Email: [cathal.buckley@teagasc.ie](mailto:cathal.buckley@teagasc.ie)

#### Application Procedure

Submit an electronic copy of a curriculum vitae and a letter of interest simultaneously to:  
Dr. James Breen ([james.breen@ucd.ie](mailto:james.breen@ucd.ie)) and Dr. Cathal Buckley ([cathal.buckley@teagasc.ie](mailto:cathal.buckley@teagasc.ie))

**Closing date: Friday May 7<sup>th</sup> 2021 at 5pm**