



## PH.D. OPPORTUNITY (FUNDED)

### "Real-time scanning for ryegrass sward nutritive value by mobile NIRS"

#### Background

Growth in the global population and changing diets are projected to bring a 70% increase in global food demand over the next 40 years. Ireland should capitalize on this potential and position itself as a globally renowned centre for food production. Food Harvest 2020 proposes a 50% increase in Irish milk production by 2020. The competitive advantage of Irish milk production is based on the efficient production and utilisation of high quality grazed grass. Grass quality is represented by grass organic matter digestibility (OMD). High grass OMD is essential to delivering adequate nutrition to dairy cows.

The ultimate goal for dairy farmers, service providers and researchers is to be able to accurately predict the grass OMD instantaneously. This is not achievable using current laboratory methods to conduct the OMD analysis. A more rapid, labour- and cost-effective method of predicting grass OMD is required. One option is that presented by Near Infrared Reflectance Spectroscopy (NIRS). The objective of this project is to improve the accuracy and speed in determining grass OMD using NIRS.

#### Requirements

Applications are invited from graduates holding or expecting an honours degree in Science. The successful candidate should be highly self-motivated.

#### Award

The PhD is a joint research project between AgriFood and Biosciences Institute (AFBI), Queens University Belfast (QUB) and Teagasc and is funded by the Department of Agriculture, Food and the Marine 11/SF/309. The student will be primarily based at Teagasc, Moorepark, Co. Cork with possibly some experimentation at AFBI, Crossnacreevy and will be registered at QUB. The student will work under the supervision of Dr Trevor Gilliland (AFBI) and Dr Eva Lewis (Teagasc). The PhD provides an annual stipend of €22,000, which is tenable for 3.5 years. University fees are paid by the student from the stipend.

#### Further Information/Applications

Dr Eva Lewis, Teagasc, Grassland Science Research Department, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork, Ireland  
Phone +353 (0)25 42673      email: [eva.lewis@teagasc.ie](mailto:eva.lewis@teagasc.ie)

#### Application Procedure

Applicants should submit a CV and cover letter detailing their qualifications and experience by email to Dr Eva Lewis.

**Closing date** 5pm Thurs 5<sup>th</sup> June 2014