



### 3 PhD opportunities in Dairy and Grassland at UCD Lyons Research Farm

There are currently three PhD opportunities as part of the **NutriGen** project funded by the Department of Agriculture, Food and the Marine based at UCD Lyons Research Farm. The overarching objective of the NutriGen project is to deepen knowledge on the interaction between genotype and nutrition with particular reference to adequate nutrition of the high yielding dairy cow at the shoulders of the milk production cycle to optimise feed efficiency and energy balance. This project is an interinstitutional collaboration between UCD, Teagasc and AFBI. Our hypothesis is that dairy cow genotype and nutritional management do have an impact on negative energy balance in a seasonal grass based system of milk production from high yielding dairy cows. There are potentially a number of key drivers of intake, performance, production efficiency, energy balance, health and fertility during the early lactation period for high yielding cows, including their interactions with nutrition and cow genotype. High yielding dairy cows have a higher requirement for energy intake and in a grass based system providing the accepted energy requirements whilst also following best practise guidelines for pasture management can be a challenge. Problems with milk quality are more pronounced in a seasonal system and issues of milk quality in late lactation is an area of concern for the industry as a whole, in addition, there is much debate about the correct supplementation strategies and also the response to supplementation of various cow genotypes in late lactation. Therefore, there is a need to complete new dairy cow nutrition experimentation through the following PhD programmes:

1. Nutritional strategies to reduce the severity and duration of negative energy balance and the associated negative metabolic status in high yielding dairy cows in a high input grass-based system  
*Principle Supervisor: Prof. Finbar Mulligan*
2. Optimising grass dry matter intake in early lactation of high yielding dairy cows  
*Principle Supervisor: Dr Bridget Lynch*
3. Supplementation strategies for grazing spring calving dairy cows of differing genotypes in autumn  
*Principle Supervisor: Dr Karina Pierce*

The PhD programme will involve further training in experimental design, statistical analysis, scientific writing amongst other modules as appropriate. The experimentation is largely with dairy cows with some grassland plot field work with Dr Bridget Lynch, followed by an analysis period in the Animal Nutrition Laboratory. There will be opportunities to present your finding at the national and international scientific stage.

**Requirements:** Candidates should have a minimum upper second-class honours degree in agricultural science/veterinary medicine.

**Award:** The PhD award provides a stipend of €24,000 per annum. University fees are paid by the student from the stipend. The successful candidates will register with the School of Agricultural Science and Food Science and the School of Veterinary Medicine at University College Dublin for a PhD degree.

#### Further Information

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#### Application Procedure

Submit an electronic copy of Curriculum Vitae and a letter of interest **indicating preferred PhD topic(s)** to:

[cornelia.grace@ucd.ie](mailto:cornelia.grace@ucd.ie). Application deadline: 5pm, Friday 28<sup>th</sup> April 2017.