



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

UCD Masters Scholarship (School of Agriculture and Food Science)

Scholarship title	Economic modelling of potential intervention strategies used to replace zinc oxide and reduce antimicrobial usage on Irish pig farms.
Supervisor(s)	Prof Michael Wallace (Principal Supervisor, UCD), Prof John O'Doherty (UCD), Dr Peadar Lawlor (Teagasc, Moorepark),
Duration	2 years
Funding information	Department of Agriculture, Food and the Marine
Value of the scholarship (per annum)	The studentship provides a stipend of €24,000. College fees are paid by the student from the stipend
Closing date and time	31 st October 2023 at 5pm GMT
Commencement date	January 2024

Post summary

PigNutriStrat is multidisciplinary project, including animal nutritionists, molecular biologists, microbiologists and bioeconomic modellers from University College Dublin, Teagasc and South East Technical University. The overall objective is to enhance pig health and welfare to reduce the need for antimicrobial usage, through better hygiene and biosecurity, management and nutritional strategies during pregnancy, lactation and post-weaning and education and training of personnel, veterinarians, and advisors. Specific alternatives to in-feed antibiotics will also be investigated. This project will include economic modelling and economic information will be collected for all proposed interventions.

The research will quantify the impacts of reduced antibiotic use and the improvements from changes implemented by farmers, advisors and veterinarians. The student will develop a bioeconomic simulation model in Microsoft Excel to evaluate the financial impacts of potential management strategies. The analysis will utilise primary data from parallel experimental work conducted by colleagues in PigNutriStrat as well as secondary data from Teagasc pig eProfit monitor and other sources. The financial simulations will be conducted for a representative Irish pig system to quantify impacts of changes in pig performance and costs of on-farm changes (e.g. new facilities, changing diet specifications, labour input, etc.). The student will receive discipline-specific and generic skills graduate training, including course work. They will be based at UCD and will be registered in School of Agriculture and Food Science.

Standard duties and responsibilities of the scholarship

- Literature review
- Quantification of the current cost of antimicrobial usage on Irish pig units.
- Development of a model for economic appraisal of alternative strategies.
- Application of the model to evaluate strategies to reduce antimicrobial usage
- Preparation of thesis, publications and conference papers, as well as oral and poster presentations.

Person specification

Qualifications

Essential

- Applicants should hold or expect to attain, as a minimum a 2:1 Honours degree, or equivalent, in Food and Agribusiness Management, Agricultural Science, Agricultural Economics, Business Studies or a related discipline.

Knowledge & Experience

Essential

- Experience of working with animals
- Experience of data analysis in Microsoft Excel.

Desirable

- Experience of statistical analysis
- Knowledge of animal production

Skills & Competencies

Essential

- Excellent data analysis and IT skills, organizational skills and communication skills (both written and oral)
- Ability to work as part of a team as well as under own initiative
- Ability to work under pressure to meet project deadlines
- Flexibility and ability to problem-solve
- Applicants whose first language is not English must have completed an English Language Test (TOEFL/IELTS).

Further information

For any informal queries, please contact

Prof Michael Wallace, +353 (0) 1 7167101; Michael.wallace@ucd.ie

Prof. John O'Doherty, +353 (0)1 7167128 / 6012161; John.vodoherty@ucd.ie

Application procedure

Submit an electronic copy of Curriculum Vitae and a letter of interest simultaneously to:

Prof Michael Wallace (Michael.wallace@ucd.ie)

Prof. John O'Doherty (John.vodoherty@ucd.ie)