



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

14SF855 - Agri-Food Graduate Development Programme Final Report

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SUMMARY

The Agri-Food Graduate Development Programme (AFGDP) delivered a complete graduate training programme for postgraduate students and early-career researchers across Irish HEIs in agri-food disciplines. This cycle built on the experience of the predecessor programmes (2007 & 2012) and delivered a Programme at the forefront of national and international norms for graduate training through the longest established Programme of its type. It had a scale and breadth which was far beyond any comparable Programme in Ireland.

Through the delivery of accredited modules on 36 occasions, participants received training in topics that were relevant to them in pursuing a leadership career in Agri-Food. The focus was on enhancing industrial knowledge, business and personnel management, leadership, communication as well as advanced research and development skills. The Programme fostered personnel with skills capable of leading the development of Ireland's knowledge-based bioeconomy.

The AFGDP was designed to develop postgraduates and researchers with excellence in research skills and industry-relevant competences and resulted in the development of highly skilled graduates capable of leading the innovation that is critical for the future of the Agri-Food sector. The need for initiatives such as the AFGDP, to align the supply of trained researchers from academia with demand for skills in the enterprise sector was highlighted in the report of the National Research Prioritisation Steering Group.

The structure, principles and operation of the Programme were tailored to the needs of the key stakeholders (i.e., the Irish Agri-Food sector, government agencies). Representatives of the Agri-Food industry played a leadership role at every level, from sitting on the External Advisory Board to direct involvement in training modules as presenters. The Programme organised its training mission around three pillars:

- PhD and Masters students
- Research staff
- Industry staff training/Continuing Professional Development (CPD)

KEYWORDS

Researcher, Development, Skills.

ACRONYM

AFGDP

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Section 1 - Research Approach & Results

Start Date

01 January 2015

End Date

31 December 2018

Research Programme

Food Institutional Research Measure

TRL Scale

TRL 7: System prototype demonstration in operational environment

NRPE Priority area

Sustainable Food Production and Processing

Total DAFM Award

€874,354.00

Total Project Expenditure

€834,409.00

Rationale for undertaking the Research

Increased numbers of Agri-Food graduates employed in Ireland are anticipated over the coming years as a result of Ireland's ambitious plans to drive a technology led, human capital enhanced agri-food sector. The AFGDP assisted in training new graduates to meet industry needs and ensure the workforce is kept up-skilled for the future. It is impossible to have a vibrant research community without a research talent pipeline.

The Programme met the training needs of major national research programmes, in particular for researchers employed on projects funded under DAFM calls, but also with programmes such Food for Health Ireland II and the Dairy (and Meat) Processing Technology Centres. In addition, the inclusion of employers as stakeholders ensured that the content was relevant for a range of human capital applications.

The programme was designed in such a way that the gaps in competencies identified by the agri-food industry were translated into training programmes. The programme was not prescribed, allowing researchers autonomy to prioritise their most pressing needs. Qualitative added benefits included the sectoral relevance and the broadening of the professional network among researchers in the Irish agri-food sector.

Methodology

The programme involved the inter-institutional cooperative development of 36 modular units of accredited training and development for early career researchers. Training themes were developed from extensive stakeholder consultation and each institution took the leadership on the areas germane to their research portfolio and excellence. Curriculum development followed standard higher education pedagogical and UDL approaches. Innovation was introduced to the methodology through the movement of students, extensive interdisciplinary networking, flexible learning pathways and inclusion of individualized learning platforms. All modules were recognised in multiple institutions, the first time this has happened at such scale.

Typically, modules ran as three-day face to face sessions at multiple locations nationally. Successful completion of the modules attracted five ECTS which could be used by students to meet the training requirements for their PhD programmes. Note that it was particularly important to have such a programme for agri-food researchers who are often working to seasonal timetables and in rural locations and cannot commit to traditional training.

Project Results

In all, 36 modules were delivered as part of this cycle of the AFGDP. These included training on the national and global food sector, next generation food formulation, current topics in agri-food research, innovation for the food sector, data analytics, industrial scale R&D, Leadership and management, career development, communication and media skills.

A total of 2343 students have taken AFGDP modules with the average number of modules per student being 2.43. The programme enjoyed a 100% completion rate. There was a steady growth in demand for modules of the duration of the programme from 100 per annum in 2008 to over 300 in 2018. Indeed, by the end of the programme, applications for places on the programme exceeded capacity by 20%.

Most (67%) of AFGDP participants went on to find a job in the agri-food sector with 33% finding careers in other areas. 85% of participants included the AFGDP modules on their CV. 70% report applying the learning from the modules directly in the workplace and 93% believe that they will apply the skills further as they progress in their career. One recent graduate, now in industry, reported "I cannot recommend the AFGDP courses enough for PhD students, they provide useful transferable skills, a fresh perspective on your subject areas and help you to view the bigger picture for your career path' Similarly, employer results suggest the AFGDP did a great job rounding out PhD graduates. They noted a real difference in graduate quality compared to pre-programme. While recognising the necessity for experiential experience in industry, employers say the AFGDP has made real advances in raising awareness of the commercial, self-management and practical environment PhDs will enter. By the end of the programme, 95% of participants were rating the programme as excellent or very good.

Section 2 - Research Outputs

Summary of Project Findings

This is not a conventional research project, so did not deliver traditional results. Outcomes were those trained, and some of the 36 modules delivered were as follows:

1. September 2015 - Hot Topics in Agri-Food Research UCD
2. January 2016 - Leadership in the Agri Food Sector UCD
3. April 2016 - Science Writing and Presenting Skills UCD
4. June 2016 - Preparing for a Career for the Agri-Food Researcher UCD
5. May 2016 - 21st Century Workplace Skills for Agri-Food Researchers UCC
6. October 2016 - Innovation and Creativity for the Agri-Food Researcher UCD
7. January 2017 - Leadership skills for the Agri-Food Sector UCD
8. December 2016 - Statistics for Agri-Food Researchers UCC
9. March 2017 - Next Generation Food Formulation UCC
10. August 2017 - Hot Topics in Meat Science UCD
11. April 2017 - Farm to Fork in the Bioeconomy Dublin UCD
12. May 2017 - Science Writing and Presenting Skills UCD
13. December 2017 - Agri-Food Career Management UCC
14. August 2017 - Statistics for Agri-Food Researchers UCD
15. October 2017 - Industrial Scale Research and Development (NB: Change of dates) UCC/Teagasc
16. January 2018 - Leadership Skills for the Agri Food sector - UCC
17. July 2018 - Statistics for Agri-Food Researchers - UCC
18. April 2018 - The National and Global Agri-Food Sector - UCC
19. December 2018 - *Agri-Food Career Management UCC
20. February 2018 - PhD and beyond Masterclass UCC
21. November 2017 - Innovation and Creativity for the Agri-Food Researcher UCD
22. March 2018 - Media Skills Training for the Agri Food Researcher UCD
23. May 2018 - Communication Skills for the Agri-Food Researcher UCD
24. October 2018 - Innovation and Creativity for the Agri-Food Researcher UCD
25. November 2018 - Hot Topics in the Agri-Food Sector UCD
26. January 2019 - Leadership skills for the Agri Food Researcher

Summary of Staff Outputs

Research Output	Male	Female	Total Number
Other / Temporary	0	2	2

Section 3 – Leveraging, Future Strategies & Reference

Leveraging Metrics

Type of Funding	Funding €	Summary Resource
Exchequer National Funding	€249,908.35	Three sources of national exchequer funding were leveraged by the AFGDP: Teagasc post-doctoral development programme, Macra Leadership for young professionals and Bioencapsulation training school. The breakdown of these funding incomes is as follows: <ul style="list-style-type: none">• Teagasc: €240,331.35• Bioencapsulation: €6,058• Macra na Feirme: €3,619
Non-Exchequer National Funding	€320,000.00	DAWN Meats Graduate Development Programme

Future Strategies

The cessation of the AFGDP leaves a major gap in the training provision for agri-food researchers in Ireland, and the project team have met with frequent queries from students and supervisors specifically requesting such training (waiting lists of over 100 in UCC alone for training). While some needs can be met by local provision of training in HEIs, this is not available in all HEIs engaged in agri-food research in Ireland, and also the scale and scope achieved by the national AFGDP programme cannot be replicated at local level (there are also challenges for Irish students registered at non-Irish HEIs in terms of accessing training post-pandemic). Thus, the team remain committed to the principle that this was a unique and very valuable programme and remain open to discussions on future developments in this space.