

The
DOUGLAS BOMFORD
SUPPORTING AGRICULTURAL ENGINEERING *Trust*

Education and Training

Dr David Llewellyn
(Patron)

Education and Training

In addition to the wide range of activities supporting individuals or groups:

- Significant contribution to HAU's agricultural engineering teaching and research facility (incl the Douglas Bomford Lecture Theatre)
- Sponsored Chair / Reader in "Applied Farm Mechanisation and Management" at RAU
- Language Laboratory at Silsoe College



Travel Grants

Provided for:

- Individuals and Groups
- Conferences, Exhibitions
- Careers Fairs
- Competitions
- Projects
- Study tours



Encouraging and supporting young engineers

- Sponsor IAgRE Student Membership (~300/yr)
- Annual Scholarships - for students on a relevant course at any university (~8/yr)
- Arkwright Scholarships - for A-level students (~4/yr + 2 extra in 'Jubilee Year')
- Visits to manufacturers etc (*Offers needed to host visits*)



Skills/education/professional development

Involving support for:

- The “Arkwright/Smallpeice” scheme at schools
- Undergraduate studentships/scholarships
- Technical training courses
- Student membership of The Institution of Agricultural Engineers
- Travel to technical events and as part of projects
- Undertaking PhD research projects
- A limited number of Masters level projects

Research projects are selected to provide a strong training element for the student and with strong supervision

A New Strategy



Aims of the Strategy

To enable:

- The available funds to be used effectively and so make a 'value for money' contribution to UK agricultural engineering.
- **Investment in the right people – stimulate and maintain interest in the profession and develop skills, knowledge and experience in agricultural engineering.**
- **The identification (and initiation) of suitable projects that provide a training environment and the opportunity to advance innovation and scientific understanding.**
- The monitoring of progress - ensuring and encouraging delivery and providing feedback to all relevant parties.
- The encouragement and stimulation of collaboration within the agricultural engineering sector.
- The capital value of The Trust to be maintained while maximizing the amount paid out as grants except where there are situations that would justify higher levels of expenditure.

The Changing Educational Landscape

Some recent developments:

- Introduction of T Levels and potential for A Level reform, alongside a continued focus on apprenticeships. Introduction of the Skills and Post-16 Education Act in April 2022.
- Continued funding pressures in the education system: Hilary Leever, Chief Executive of EngineeringUK reported (The Engineer, 27 Sept 2023) a 14% fall in government funding for 16-18 year olds at colleges in England since 2010. Fees are frozen in HE and schools face many financial pressures'
- A Financial Times survey in 2022 suggested that around three-quarters of colleges in England were unable to recruit the staff needed to teach technical and digital subjects (78% in engineering; 62% in IT and computing)
- Problem of finding suitably qualified teachers and lecturers in engineering and other STEM subjects (despite recent initiatives to improve pay for new teaching staff in schools). The Taking Teaching Further programme supports FE providers to recruit those with relevant knowledge and industry experience to retrain as FE teachers, with financial incentives for the college and trainee.
- Call for more industry engagement to address these workforce challenges (eg teacher placements in industry and releasing industry staff to support teaching in schools)
- And this is even before we consider the particular issues of agricultural/land-based engineering....

Independent Labour Review

- The review, led by John Shropshire, reported in June and we now await the government's response, which is due later this year.
- A considerable amount of feedback was obtained from a survey of businesses within the agri-food system, follow-up interviews and round table discussions with sector bodies and individuals.
- The review's recommendations called for a comprehensive strategy to aid recruitment, led by the Food & Drink Sector Council; a longer term agreement for seasonal workers; adding food chain workers to the Shortage Occupation List; industry investment in domestic worker development; reform of the apprenticeship levy; greater collaboration, and better data, on the supply of suitably qualified people, including a national workforce data strategy; incentives for the adoption of automation, together with greater collaboration on innovations in technology and knowledge transfer relating to those innovations.
- The recruitment strategy needed to highlight STEM skills and their use in agri-food chain roles, not least in the Engineering and Manufacturing T Level pathways.
- In colleges, 60% of 'large course' 16-18 provision in agricultural engineering was at Level 3 and 40% at Level 2, with almost all at specialist institutions and with overall low numbers, but an increase of 123% in apprenticeships between 2018 and 2022.

EFRA Select Committee Inquiry (1)

The inquiry submission deadline was 3 November. Its aim is:

To explore the relationship between education and the land-based industries and the effectiveness of current primary, secondary, further and higher education in embedding awareness and equipping students with the skills and knowledge necessary.

It will examine existing and potential initiatives aimed at promoting career opportunities in land-based sectors and consider any examples of best practice for this, in UK and abroad, and consider what more can be done to facilitate new entrants into land-based industries, including people from non-rural backgrounds and those considering a career change. Also accessibility and availability of land-based courses and how equipped institutions are to teach them.

The Committee sought views that address any or all of the issues raised in the following terms of reference:

1. How can the understanding and awareness of career opportunities in land-based sectors be improved among children and young adults?
2. How effective is the education system at supporting young people seeking careers in land-based sectors? For example, are routes such as T levels and apprenticeships fit for purpose?

EFRA Select Committee Inquiry (2)

And:

3. What more can be done to facilitate new entrants, including those from non-rural backgrounds, into land-based sectors, including those considering a career change?
4. Are colleges offering land-based education accessible and available to those seeking to enrol in courses? Are there gaps in coverage and if so, how can these be addressed?
5. Do colleges offering land-based education have the appropriate facilities and funding to enable effective teaching (e.g. access to farmland)? What more can be done to make this teaching more effective?
6. What role should schools, colleges, universities, and local and central government play in promoting and supporting careers in land-based sectors?
7. How can more children, young people and adults be provided with opportunities to see the career opportunities in land-based sectors first-hand? Are there examples of initiatives doing this successfully (for example, through initiatives such as Open Farm Sunday)?
8. Are there domestic or international examples of best practice in successfully promoting educational opportunities and careers in land-based sectors?

Lifelong Learning Pathways for the Agri-Food Sector

A report by the Lifelong Education Institute/ResPublica, October 2023:

- Identified a gap between the skills requirements of the agri-food sector and available skills provision by agri-food education institutions, with unresolved questions about workforce training priorities and a lack of government funding for training and retraining, not least in new national policy areas.
- Called for the designation of the agri-food sector as a strategic industry, with Lifelong Learning Pathways established as the primary framework for skills and career progression.
- Also called for an enhanced Lifelong Learning Loan Entitlement to cover 6 years of tuition and maintenance, together with a 'strategic skills tax credit' for businesses, proportional to the number of industry placements and employees undertaking 'on the job' training and upskilling.
- Suggested the creation of a single sector-wide accreditation, quality assurance, credit interoperability, and credit transfer system for agri-food qualifications.
- Highlighted the important role of sandwich degrees and the value of such industry connections, as described in a case study on Harper Adams University, as well as the concept of Living Labs to support practical education across future skills requirements, including in engineering and technology.
- Identified a strategic requirement for agri-food education/skills support via Local Skills Improvement Plans.

‘Fit for the Future’ – EngineeringUK

Inquiry Report, October 2023: Objectives and some recommendations:

- Set out to investigate what could be done to reverse the decline in apprenticeship starts over recent years and to achieve sustained growth in engineering, manufacturing and technology apprenticeships, particularly for young people. The inquiry focused on England, while recognising the role and importance of apprenticeships in the devolved nations of the UK.
- That government directs and supports all schools to offer a broad and more balanced curriculum up to the age of 16, that yields knowledge and skills that are relevant to a variety of careers and to a diversity of learners and enables ongoing access to hands-on subjects, such as design & technology during key stages 3 and 4.
- That government develops a new careers strategy with parity of esteem between technical and academic pathways.
- That government expand its pre-apprenticeship offer for young people aged 16 to 18, by building and improving on existing programmes such as the T Level transition programme and traineeships, and by continuing to fund BTECs as an alternative pathway alongside T Levels.
- Also addressed issues of apprenticeship funding, access by SMEs, reducing bureaucracy, rationalising engineering apprenticeship standards, and encouraging industry to help deliver training provision.

Some Common Themes?

For discussion in the break-out session on education and training:

1. How do we make sure that agricultural engineering features strongly in sector/government careers initiatives (either for agri-food or engineering)? Are there particular messages that might appeal to those from non-rural backgrounds and other under represented groups?
2. Are there domestic or international examples of best practice in successfully promoting educational opportunities and careers in land-based sectors?
3. How can we encourage industry to play a greater role in education/training provision (as teachers and/or assessors) and can we find time for 'refresher' training for full-time teaching staff?
4. What gaps can we identify in current agricultural engineering/technology education/training provision, by subject, region or both?
5. What roles can the farming community play in supporting education/training in the practical use of technology (akin to the idea of Living Labs)?
6. What should be the priorities for the provision of training/education in engineering and technology for those already engaged in the agri-food industry?

A New Strategy

