

## Professional

### The Douglas Bomford Trust

First, the AgriFood Charities Partnership (AFCP) 2024 Student Forum took place at NIAB Park Farm, Cambridge on 13<sup>th</sup> March. A significant proportion of both the presentations and posters were by PhD students supported by the Douglas Bomford Trust (DBT), namely:

**Presentations:** Bethany O’Sullivan (University of Nottingham) “Conservation agriculture: the soil and the crops”; Ana Prada Barrio (Harper Adams University) “The effects of traffic and tillage management systems on soil organic carbon dynamics”; and Scott Fraser Ewing (University of Glasgow). “Investigating the effects of novel light treatments on crop growth”.

**Posters:** Edwin Toreveyi (Harper Adams University). “The potential for pre-harvest prediction of potato storage disorders”; Josie Lynch (University of Worcester). “Quantifying soil erosion volume using drones”; Theo Welby (Cranfield University).

“Evaluating efficacy of carbon capture based organo-mineral fertilisers (OMF) to meet crop demands”; Callum Lennox (University of Lincoln). “The development of a real-time vision-based spot spraying platform for high efficiency and precision weed management”; Wing Ng (Hartpury University & UWE Bristol). “Achieving net zero through farm level carbon assessment”; Daniel Evans (Cranfield University). “Developing the use of drone-based synthetic aperture radar (UAV&RADAR) for soil moisture assessment”; and, Aaron Ainsworth (University of Birmingham). “Sourcing the next generation of lubricants: exploring the potential of new natural sources of lubricants for industrial applications”.

## Student Forum

*Technical Secretary to the Douglas Bomford Trust David R White has lots to report this quarter.*

Well done to everybody. We wish them continued success in their studies.

### Travel award result

Sven Peets, Senior Lecturer in Mechatronics, Engineering Department, Harper Adams University, attended the DEWESoft 2024 Measurement Conference in Laško, Slovenia on the 15–19 April. It brought together engineers from all over the world who had a common professional interest in DEWESoft data acquisition solutions. There were technical presentations on products and measurement techniques, equipment displays and user show cases ranging from automotive to space applications. Key highlights were: automotive buses will change to zonal architecture in the future; Open Data Acquisition Platform enables seamless integration of different data acquisition devices; contemporary high-speed data acquisition instruments enable user-friendly integration with industrial real-time control systems over EtherCAT. “A sincere thank you to DEWESoft UK for the invitation, and the Douglas Bomford Trust for the Travel Award.

### Student trip to the United States

In April 2024, 6 final year Harper Adams University (HAU) MEng students, Rhodri Williams, Luke Waldram, Harry Rigby, Charlie Jackson, Dominic Neal, and Kelly Billington visited Mississippi State University (MSU) for 2 weeks.

Based at the Agricultural Autonomy Institute (AAI) which is focused on Agricultural Autonomy, supporting Precision Agriculture and more sustainable farming practices. With contributions from industrial partners, researchers, academics and MSU students they work on a range of autonomy projects for different areas of agricultural needs.

Many of their projects were applied to American grown crops, such as cotton, and a fully autonomous boat for scanning and surveying lakes and waterbodies. Based on the HAU Hands Free Hectare project, MSU have recently set up their own Autonomous Acres Proving Ground. The initial contact with MSU was made by Kit Franklin (HAU Senior Engagement Fellow and IAgrE President Elect) and the visit was organised by the students.



Vehicle data acquisition set-up

The students met MSU students and academics, industrial partners, and University Alumni. They worked with Alex Thomasson (AAI) Director and Madison Dixon (AAI) Associate Director.

MSU students will visit Harper Adams in June 2024, where they will engage with HAU projects and culture.

Rhodri summed it up “The culture is very different. It was interesting to experience a different student life and different rural areas. A fascinating trip, and I look forward to seeking further opportunities in



Standing L to R: Dominic, Harry, Charlie, Rhodri and Luke. Kneeling: Kelly



Standing: Richard Robinson and David R White. Seated: Rhodri, Elsa, Jack, Ben, Tom and Ilan. David R White, Douglas Bomford Trust Technical Secretary

the near future with MSU. Thank you DBT for the continued support”. The DBT supported the travel for the trip.

### Scholarships awarded

May saw 6 Douglas Bomford Trust Scholarships presented by DBT Trustee, Richard Robinson, to engineering undergraduate students Tom Edwards, Jack Hughson, Elsa Marsh, Ben Middleton, Ilan Williams, and Rhodri Williams at the Harper Adams University Scholarship Presentation. Congratulations to all: the Trust looks forward to receiving updates on how the awards make a difference to your studies and career development.



For further information, see the Trust’s website: [www.dbt.org.uk](http://www.dbt.org.uk) or contact the Technical Secretary

David R White via: [enquiries@dbt.org.uk](mailto:enquiries@dbt.org.uk)

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