

## Professional:

Douglas  
Bomford Trust



## A busy few months – despite..

*Alan Plom, Secretary to The Douglas Bomford Trust teases out some ‘academic’ positives from*

### Supporting Students

One noticeable effect of the pandemic has been a significant

increase in requests for financial support from students in many countries hoping to study in the UK. Our Trust does not normally fund course fees or stipends, but many

students now need our moral as well as fiscal support. We provide a wide range of support for students based or studying in the UK.



## The Trust has continued to support students

### 1. Mentoring

Virtual meetings are now the norm for us all and our Trustees have been able to mentor and conduct interviews or project reviews without visiting students and their supervisors at universities. Whilst this has reduced the risk of infection as well as our carbon footprint, we are aware that many students have

been affected (even infected) by Covid-19. Programmes of study and research have suffered directly or indirectly as a result of the pandemic restrictions. The scope of some PhD projects has been revised or deadlines extended, so it was a relief to hear that all our sponsored undergraduate and masters students made it over the line successfully.

### 2. Travel Grants

The Trust normally provides a number of grants each year for students (and lecturers) to attend international conferences, shows and other events. Whilst events have been cancelled this year, not all opportunities for knowledge transfer have been lost, as most have been deferred or held virtually.

One of our potential recipients of a travel award was doubly disappointed though. Harriet Housam (pictured left) from the Royal Agricultural University (RAU) had originally hoped to present the findings of her MSc research project on 'Calf thermal-imaging systems' to the European Conference on Precision Agriculture in France in July 2019. When that fell through, the Trust agreed to provide a travel grant to enable her to attend the 15th International Conference of Precision Agriculture (ICPA), which should have been held in Minneapolis this July instead.

When that event was cancelled, she was invited to contribute to the International Society's webinar on 'Intensifying Farm Management' held on 3 September. Whilst speaking from home rather than enjoying a trip to USA was a poor substitute, at least it was a chance to publicise her research to a wider audience.

The abstract is available:

<https://www.dbt.org.uk/previousresearch-projects>

and other papers from the series of ICPA webinars can be viewed at:

<https://ispag.org/icpa>

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### 3. Projects

The Trust co-sponsors more than 10 PhD's each year. These are now listed with links to relevant information on our website at:

[www.dbt.org.uk/researchprojects](http://www.dbt.org.uk/researchprojects)

We also provide sponsorship for other projects, such as Harriet's mentioned above. She needed a

thermal camera and associated equipment to develop a monitoring system to measure calf temperature using machine vision software, as part of her MSc in Agricultural Technology and Innovation at RAU. This was funded on the basis that it would be available for use by other students in future. Harriet obtained a Distinction and kindly acknowledged the Trust's support for her project.

Harriet was supervised by Dr Karen Rial-Lovera\*, whose Lectureship in Agricultural Engineering at RAU was also sponsored by the Trust.

[\*Karen is now a Senior Lecturer at the School of Animal, Rural and Environmental Sciences, Nottingham Trent University.]

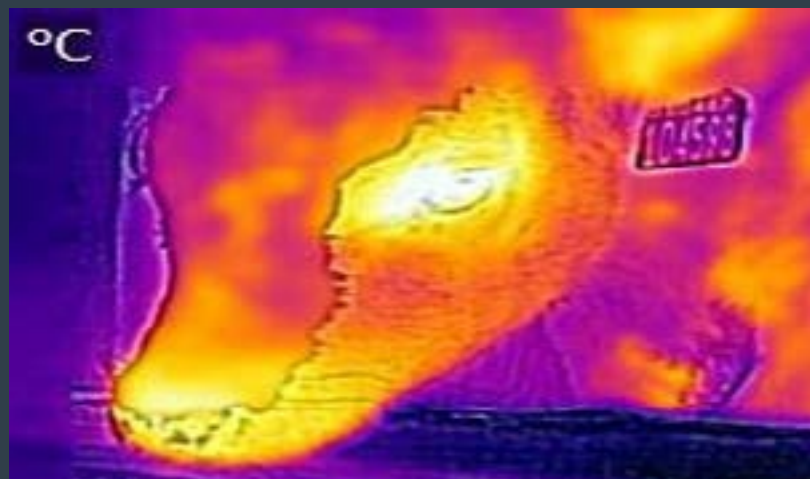
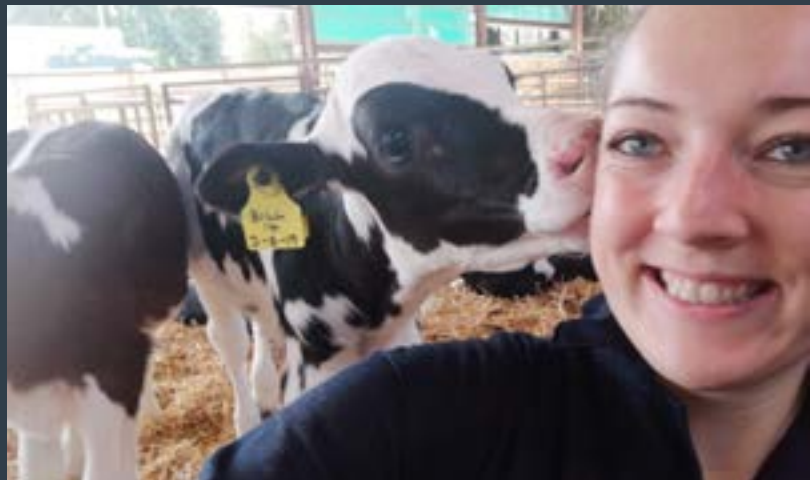
### 4. Scholarships

The Trust will again be funding four A-level students under the Arkwright Scholarship Scheme. These are awarded to pupils who show promise and interest in agricultural engineering. We encourage them to attend local IAgRE branch meetings and manufacturers, and we hope we will get to meet them in person soon. We also look forward to receiving and considering applications for scholarships through existing schemes at Haper Adams University and RAU in December. Please note this is an open competition; we are also encouraging students from other universities to apply.

## The calf monitoring system

Harriet Housam's innovative calf monitoring system using a thermal camera was installed in the calf shed at Duchy College. It cost less than £1,500 to set up and showed no decline in performance, even in harsh conditions. It allows for more reliable and non-invasive detection of body temperature for unrestrained animals. It could be accessed from a remote computer and the output of the algorithm was suitable for further in-depth analysis. It has great potential as a valuable tool to inform and improve management decisions on commercial farms. It is anticipated that it will be installed in the College's new 'Future Farm' demonstration building. Harriet is now a researcher in the Rural Business School, working on the 'Two Minute Farmer' project, which aims to break down the big challenges in farming into 'manageable chunks' to inform the farming community.

[www.2minutefarmer.co.uk](http://www.2minutefarmer.co.uk)



## Prizes - Tom Mead (*Harper Adams*)



Although university award ceremonies have been held virtually or deferred until next year, Tom Mead was the latest student to receive his certificate and monetary prize. Tom achieved the highest mark for an agricultural engineering master's research project at HAU. His investigation into the feasibility of NRTK being adopted for machine control within a sports stadium environment illustrates the wide reach of agricultural engineering. In thanking the Trust, Tom was very complimentary about HAU's engineering lecturers, describing his course as combining two of his passions: innovation and agriculture. He is an active member of IAgRE and follows the latest developments in agri-tech, looking for new and innovative ideas with a mind to developing one of his own projects. It was also good to hear that Tom intends to gain the necessary experience to register as a Chartered Engineer.

## Comings and Goings

### Mark Kibblewhite

We said goodbye to Mark in the autumn issue of Landwards and gave him a virtual handshake after our AGM on 3 November. However, although Mark has now 'served his time' he has kindly agreed to continue to act as a mentor on a couple of projects until they are completed. Mark now intends to devote his attention to the Dorset Wildlife Trust as its new Chair. [Who better to oversee the re-purposing of a significant area of land for the benefit of wildlife?] Mark also hopes to spend more time sailing.

### Keith Hawken

We also said 'bon voyage' to Keith, who is emigrating to Portugal after retiring from AEA in December. Having lived there partially for 15 years, he and his wife feel it is now time to fully immerse themselves in a new way of life, in a warmer climate. With envy, we wish them both well. But just to endorse the saying "Engineers don't retire", Keith couldn't resist undertaking some project work with two universities in Portugal, so this is probably not the last we will hear of him.

If you have relevant experience and expertise within the broad spectrum of agricultural engineering and would like to help the Trust support research and develop young students and others involved in agricultural engineering, please contact the Secretary .

**Contact Sarah McLeod**  
**01234 750876**  
**Secretary@iagre.org**

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## Welcome addition to our board - John Baines

John is a welcome addition to our Board, having had a long and distinguished career in the dairy industry. Now an independent consultant advising leading companies on milking installations, dairy building layout and design, he has written numerous technical papers and publications and held many key roles. Currently Chair and technical adviser to the Milking Equipment Association, he is also a member of the Dairy Science Forum, dedicated to strengthening the way science contributes to both the well-being of dairy cows and the industry.

John started with ADAS, advising farmers on milking technology, cow management, hygiene, milk processing and retailing. He became the national milking technology specialist, before moving into the private sector as product manager and later technical director of Fullwood (and its Dutch sister company, Fusion Electronics BV). He was responsible for development, support and maintenance of automation, process control and the dairy herd management hardware/software systems

used in Fullwood milking machines, including fully automated systems.

John was also involved in setting up an R&D based company owned jointly by Fullwood and DEC; he acts as managing adviser for a company based in New Zealand. His international experience also encompasses dairy farming in a variety of climates and animals (including goats, sheep, buffalo and even camels!).

His representational roles are also impressive, including BSI and ISO Committees for Milking Machines and Cleaning of Milking Installations and the International Dairy Federation's Working Group on Machine Milking. He is also a member of the Milking Equipment Association's Technical Committee and responsible for content and quality of the 'ParlourSafe' Technician Accreditation Scheme.

John will be a great asset to the Trust with his extensive experience in novel R&D, knowledge transfer and training fitting well with the Trust's aims.



## Twittering on.....

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to keep updated, with links to relevant tweets, articles, webinars and other events.

Our website:

**[www.dbt.org.uk](http://www.dbt.org.uk)**

has been updated with our latest guidance on applications and new 'drop-down' menus to help access information on recent research and other activities. You can also contact the

Secretary by email:

**[enquiries@dbt.org.uk](mailto:enquiries@dbt.org.uk)**

or phone:

**07951 527051**