

The
DOUGLAS BOMFORD
Trust

*The only UK charity focused on
Engineering and Technology for Agriculture*

**The Trust's contribution
over 5 decades**

Nick August
(Board Chair)

The
DOUGLAS BOMFORD
SUPPORTING AGRICULTURAL ENGINEERING *Trust*

Mission: *“To provide funding to help advance the application of engineering and technology to achieve sustainable agricultural, food and biological systems, for the benefit of the environment and mankind”*

1. To support and advance the science, practice and profession of agricultural engineering, especially (but not exclusively) in UK.
2. To fund relevant research and capital projects, and
3. To encourage and enable capable and talented young engineers to realise their full potential and pursue a career in agricultural engineering.

Successful delivery

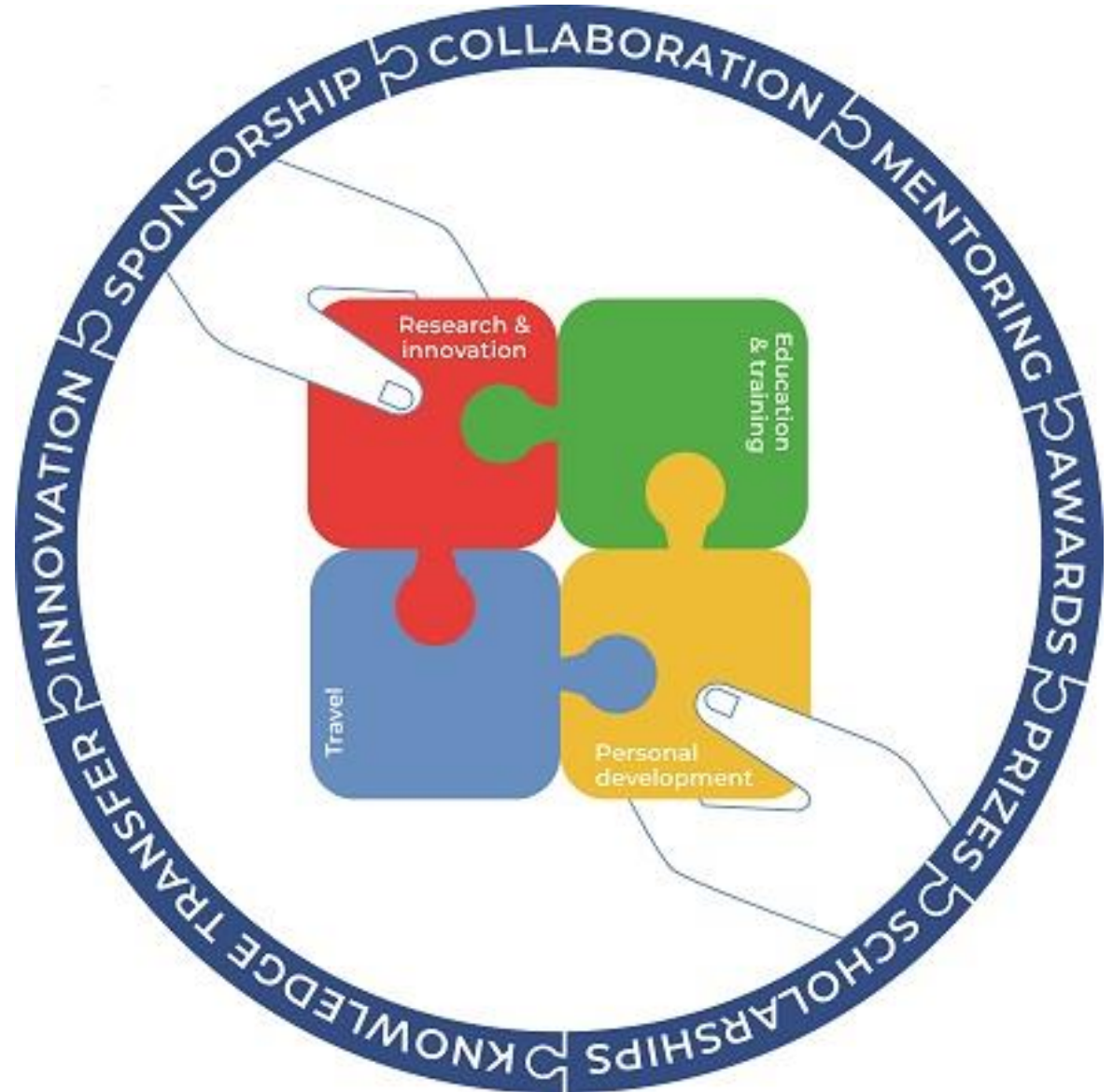
The Trust provides funding primarily for:

Research and innovation

Education and training

Travel

Personal development



Achievements

The Trust has allocated over £2mill to sponsor:

- **Dozens of PhD students** – currently co-sponsoring ~10 research projects at any time.
- **Hundreds of students travel grants** - to attend national and international conferences and events, study tours, training courses, and visit businesses.
- **Dozens of prizes** to recognize and reward excellence,
 - eg 'Best Student' prizes at Universities;
 - Awards for 'Best Paper' in IAgRE Journals, etc).

Many recipients are now in leading roles as lecturers, researchers, supervisors, company directors, consultants, etc.



Wide range of research at ever-widening range of universities

Examples of Soil & Water Projects:

HAU:

- long-term 'Traction and Tillage' projects).

Cranfield:

- Controlling sediment and phosphorus losses;
- in-field measurement of nitrogen;
- precision irrigation to improve water and energy management for sugarcane.

Reading:

- Flood management strategies on production.

Worcester:

- Using drones to monitor effect of conservation agriculture on soil erosion and flood protection.

Nottingham Trent:

- Conservation agriculture on soil, crop growth and yield.

Birmingham:

- Water desalination (in Jordan Valley = International/inter-University).



Recent Plant / Crop Management Projects

Cranfield:

- Variable rate application of plant protection products
- use of PAM to prevent splashing and capping
- novel green fertilisers using carbon capture technology to improve soil health and grain quality

Imperial College, London:

- Using spectral signatures of plant leaf biochemistry to understand and diagnose plant stress

Reading:

- Herbicide ejector for plant specific weed control by autonomous robot for field vegetables

Glasgow:

- LED lighting & crop quality in vertical farming

Lincoln:

- UV-B radiation driving variation in UV-absorbing area of flowers;
- Real-time vision-based spot spraying for high efficiency and precision weed management

Livestock projects

Liverpool John Moore University

- 'Virtual' fencing and remote monitoring of grazing livestock.

Nottingham

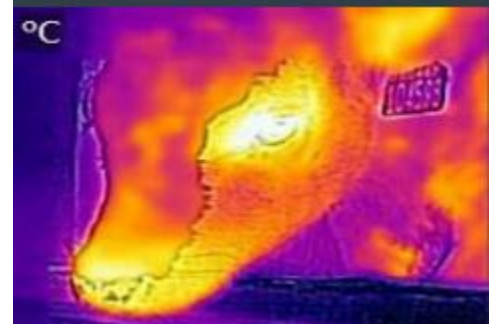
- Image-driven monitoring solutions for dairy cow management (for parturition and animal health).

HAU

- Ventilation in pig units.

RAU

- Calf monitoring with thermal imaging ('Future Farming' demo).



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).
- Sponsoring a Chair and a 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*)



Long association with IAgRE

THE DOUGLAS BOMFORD THIRD MEMORIAL LECTURE

BACKGROUND NOTES

THE LECTURE

In 1976 Dr. Jones presented the I. Mech. E. James Clayton Lectures entitled "The Economic Ingredients of Industrial Success", and this received wide publicity in financial and professional engineering circles. By analysing published company figures, applying added value calculations and considering the assets per employee, Dr. Jones discussed the problems facing U.K. companies in relation to overseas competition.

Since 1976 Dr. Jones has lectured — notably at the Cranfield Business Conference — and, as President of the Engineering Industries Association, is much involved in discussions with Government Departments concerning the U.K. problems in industry.

In the Douglas Bomford Third Memorial Lecture "An analysis of Economic Success in Agricultural Engineering" Dr Jones will present an analysis of the economic performance of a number of (anonymous) manufacturers, based upon data which have been published by the companies concerned. The progress of these organisations will be compared with a small sample from Japan, Europe and the U.S.A.

T.C.D. Menby,
Convener



THE
INSTITUTION
OF AGRICULTURAL
ENGINEERS

West End Road, Silsoe, Bedford MK45 4DU
Telephone: Silsoe (0523) 61096

THE DOUGLAS BOMFORD THIRD MEMORIAL LECTURE, AND THE INSTITUTION OF AGRICULTURAL ENGINEERS SUPPER 17 OCTOBER, 1979.

PROGRAMME

Lecture

1700 Tee At the National College of Agricultural Engineering.

1730 Lecture "An Analysis of Economic Success in Agricultural Engineering", Dr. F. E. Jones, in the England's Hall at the National College.

1815 Discussion.

The Lecture is sponsored by The Douglas Bomford Trust.

The Host is E. S. E. Southcombe, Esq., Chairman, South East Midlands Branch, The Institution of Agricultural Engineers.

If you propose attending the Lecture only, we would be grateful if you could enter the number attending in the box on the opposite page and return it to us; there will be plenty of room but we do want to ensure that adequate seating arrangements have been made.

Buffet Supper

The Host is J. C. Weeks, Esq., President of the Institution of Agricultural Engineers.

1915 for Buffet Supper at West Park Mansion, Silsoe.
1940

2045 Guest Speaker, J. G. Dawson, Esq.

If you propose attending the Supper, please let me know by return, and in any case by not later than 1 October 1979. Numbers are strictly limited.

The important occasion is supported by:
The Agricultural Engineers' Association,
The British Agricultural and Garden Machinery Association,
The National Institute of Agricultural Engineering and
The National College of Agricultural Engineering

THE DOUGLAS BOMFORD THIRD MEMORIAL LECTURE, AND THE INSTITUTION OF AGRICULTURAL ENGINEERS SUPPER 17 OCTOBER, 1979.

Registration Form

Name:

Address:

BLOCK

CAPITALS

PLEASE

LECTURE (ADMISSION FREE)

(/We shall be attending the Lecture only. (Number)

BUFFET SUPPER

I shall be attending the Supper and will be accompanied by:

.....

.....

.....

Please reserve Suppers at £8.50 each (including VAT); I enclose cheque for £..... made payable to: The Institution of Agricultural Engineers.

I require a VAT invoice (please tick this box if required)

VAT Reg. No. 301 8073 00.

Please return this form to:

Mrs. Edwina J. Holden (Conference Secretary),
The Institution of Agricultural Engineers,
West End Road, Silsoe, Bedford, MK45 4DU.

If you would like to have details of any of the Institution National Conferences mentioned overleaf, when available, please tick the appropriate box.