LAND BASED EDUCATION: A FOUNDATION FOR PROSPERITY

Recommendations:

- Recognise food and environmental security as a national priority
- Develop a national strategy to grow and upskill the workforce
- Launch an ambitious national land based careers awareness campaign
- Develop better ways of recognising the skilled nature of land based careers
- Increased research funding for agri-food discovery research
- National support for demonstration farms throughout the UK
- Continued support for the high costs of agriculture and land based subjects and specialist colleges and universities
- Apprenticeship levy funding targeted at small businesses in strategically important areas

LAND BASED EDUCATION MANIFESTO

GuildHE

Landex
Land Based Colleges & Universities Aspiring to Excellence

FOOD AND ENVIRONMENTAL SECURITY

Food security, climate change and the biodiversity crisis are some of the biggest issues facing society today. Sustainable farming, agri-tech and land based education are essential to tackling these challenges by developing a workforce of problem solvers, critical thinkers and entrepreneurs.

Understanding and managing land is fundamental to future national and global prosperity. Land and natural capital are growing in value. Crucially, every plausible path to meeting the great challenges of our time – food, water and energy resilience, and the climate and nature crises – hinge on transforming our relationship with land.

Agriculture in the UK provides half the food that we eat and employs 4.2 million people across the agri-food sector. The gross value added to the economy in 2021 was 13 billion from agriculture and fishing alone, rising to 128 billion as a whole sector.

Food – and food inflation – is of key importance and supply chain disruption has become more frequent. Food inflation disproportionately affects those in society on the lowest income who are least able to cope with the impact. To meet the social challenges of ethical supply and productivity the UK will need to increase sustainable production, using science-led and technological solutions to improve efficiency and reduce environmental impact.

‘Green skills’ are a priority to meet the challenges of environmental security, reduction of carbon and other greenhouse gas emissions, and the fight against climate change. The UK needs a workforce of expertise to secure a thriving landscape of rich biodiversity, clean air and water, and manage and monitor our natural ecosystems, species and nature recovery work.

Underpinning a thriving UK economy and society in the years and decades to come will be new systems, business models and practices for managing land. They will stack functions that previously ran parallel or competed – producing food and biomaterials, generating energy, recreation, flood management, restoring nature and sequestering carbon. As farmers across the UK and Europe protest at feeling left behind, it is clear this transition will only succeed if it is fair and inclusive.

Universities and colleges are central to delivering a knowledgeable and technically skilled agricultural, horticulture and land based workforce able to embed scientifically proven sustainable practices and adopt emerging technologies in support of a thriving economy. Universities and colleges are also core to developing new approaches to food and farming through research and innovation. Agriculture, production horticulture, environmental horticulture, forestry and ancillary industries remain critical to the success of the rural economy, a diverse business portfolio that extends into land management for environmental outcomes, agri-forestry, and equine businesses, for example.

- **Recognise food and environmental security as a national priority and the role of land based education in delivering on a range of national targets including green skills priorities, net zero and a thriving rural economy**

GROW AND UPSKILL THE WORKFORCE

Technology is key to meeting challenges of food security and land management but we need to grow and upskill the workforce. A highly skilled workforce is needed to deliver consistently across the sector and the 16 year olds of today are the graduates of 2030 who will be essential in bringing innovation and solutions to the sector. A fast pace of technological advancement is driving skills' needs and the emergence of new positions in the sector. These positions often require advanced technological skills drawing on analytical approaches, critical thinking and problem solving linked to scientific research, data science and mathematical modelling.

Roles within the sector are now more complex, including the use of specialist equipment and harnessing advanced engineering, robotics and artificial intelligence. A clear understanding and articulation of the roles of the future and the underpinning knowledge, skills and behaviours is critical in order to draw from a wider talent pool, attract new talent and develop a workforce fit for the future.

- **Develop a national strategy to grow and upskill the workforce with highly skilled solutions, supporting a clear understanding of the roles of the future and their knowledge, skills and behaviour requirements**

RECOGNISING THE SKILLED NATURE OF LAND BASED CAREERS

Careers in the land based economy remain widely misunderstood. A national careers awareness campaign is essential to promote understanding of the breadth of professional roles, skills and rewards available and to attract talent from a broad range of subject disciplines across the whole UK.

This would include an update of the national careers service for the sector and SOC codes, a review of the national curriculum to reflect current science, including agricultural and environmental innovation, plus educating teachers and careers advisors about the professionalism of the sector and its opportunities. These measures would help attract new entrants whilst providing key evidence of quality training.

- **Support land based careers of the future and challenge perceptions with an ambitious national careers awareness campaign**
- **Reflect professional roles and skilled technical positions in the sector with updated SOC codes**

DRIVING INNOVATION THROUGH RESEARCH

Delivering more efficient, sustainable and economic approaches to farming requires the effective use of agricultural technology informed by the latest research and development. This not only supports food security in the UK whilst reducing net global emissions, but also increases our agricultural exports of food and specialist equipment. UK exports were worth £2.2 billion in agricultural equipment in 2022.

The decade since government's Agri-Tech Strategy has seen substantial investment in agricultural engineering and bioscience, driving novel research, seeding numerous start-ups, driving exports and crowding in private investment. However, to farmers and land managers, these achievements can feel distant. There is an urgent need to strengthen on-the-ground research and innovation, supporting practical experimentation and development, and enabling rapid change on a timescale relevant food resilience and environmental goals.

The formation of a new fifth cross consortium of research funding focussed on agri-food would support essential research and innovation, enabling land-based universities to drive solutions to global problems. Land based colleges and universities in the UK (LANDEX) currently collaborate on sector solutions through a Sustainable Farm Network (Harper Adams School of Sustainable Food and Farming). Investment and support for this initiative through directed funding would enable more research to be tested at a working farm level and facilitate connection to the wider network of Institutes of Technology, demonstration farms and knowledge exchange hubs.

- **Support discovery research funding for agri-food via a combination of cross council large consortium bids and the formation of a fifth agri-food committee by the Biotechnology and Biological Sciences Research Council**
- **Recognise and support the coordination of demonstration farms throughout the UK under the umbrella of the 'Sustainable Farm Network' (School of Sustainable Food and Farming and Landex)**

PROTECTING SPECIALIST PROVIDERS

Specialist land based universities and colleges are 365-day operations and expensive to operate. They require land, animals, laboratories, specialist equipment and the additional costs of maintaining a working farm. They are not able to cross-subsidise activity in the way that larger multi-faculty institutions can. The land-based nature of their subject mix often means they are located in more rural parts of the country and have fewer opportunities to diversify their portfolio or generate economies of scale. Students can face challenges in accessing rural campuses with limited services or links to public transport.

Most specialist land-based institutions receive the majority of their income from teaching. The undergraduate fee cap of £9,250 has risen once in the past ten years and is now worth almost a third less in real terms than in 2012. The impact of inflation, energy costs plus pay and pensions are having a significant impact. There are challenges in attracting and

retaining the best talent in teaching and research who will help shape the next generation of professionals. Similarly, resourcing technology to enable the most up-to-date training comes at a cost. The ability to access specialist funding from OfS, as specialist performing arts providers can, would support enhanced provision and promote access to land-based education.

It should be noted that many of the agricultural and food industries are family-owned businesses or SMEs. Of 22,000 agri-food businesses, only 280 employ more than 250 workers; the sector is dominated by self-employed entrepreneurs and small businesses. There is potential to upskill new professions through HTQ, FdSc and degree apprenticeships yet small employers are often unable to access funding through the apprenticeship levy. Government should pilot options including fast tracking degree apprenticeships, targeted scholarships and modular professional development in partnership with land-based universities and colleges. This would promote lifelong learning opportunities at Levels 4 – 7 and increase the diversity of the workforce. Innovative funding solutions to support SMEs in supporting next generation training, shorter-term placements at different employers may help unblock the barriers employers are facing.

- **Recognise that institutions experience inherent additional costs that are not fully covered by existing tuition fee income and "Band B" government funding for agriculture and land based subjects**
- **Support specialist colleges and universities to attract and retain talent in teaching and research**
- **Strategic investment in PhD training and postdoctoral fellowships in agricultural systems, to ensure a growing pipeline of skilled research leaders**
- **Make the apprenticeship levy funding available to small farming, food and land based businesses, recognising their strategic importance to the economy and providing a more flexible approach**

GuildHE represent over 60 smaller and specialist universities and colleges in the UK including providers in professional subject areas related to agriculture and food.

Landex represent 39 universities and colleges across the UK that deliver education and training in land based occupational areas.

Distinction and Diversity in Higher Education

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