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Institution of Agricultural Engineers

## **Landwards Conference 2021 – Zoom**

### **Future Fuels in Agriculture**

**Date:** Wednesday 3 November 2021 – 10am-2.30pm

**Location:** Online via Zoom

## Background

In an age where the media is full of stories about climate change, sustainability and carbon reduction, when would be a better time to talk about how engineers and technologists are achieving this in our industry? The creation of food from agriculture does not only consume fuel to power tractors, cool potatoes and heat glass houses for example, but also has the added advantage of being able to generate it from growing energy crops and composting waste. In this year's conference we are going to explore a range of activities from capturing methane from dairy waste to powering machinery with hydrogen. The diversity of our sector is clearly demonstrated by the diversity of the subjects that surround it when we talk about "Future Fuels in Agriculture" at our Landwards 2021 annual conference.

Mindful of the pandemic, we plan to run our conference online again this year, but this time as live session presentation via Zoom to ensure interaction`.

Our experienced presenters will take us through a range of interesting and diverse topics and developments in agriculture and horticulture. We will what some of the major OEMs are doing to enable alternative fuels and energy sources to power their products, ranging from battery electric propulsion, gas internal combustion and hydrogen. We also explore and understand the potential on-farm energy production, delving into technology that can generate fuel and power, such as liquified biomethane production and alternative ways to heat glasshouses.

The presentations will interest people working within agriculture and its associated industries, equipment and component manufacturers, dealers and service outlets, education, research and agri-tech organisations, and will give a taste of the technologies being explored whether adoption is imminent or several years away. As members of IAgrE, we do hope you will join us and attend, we also hope that you will inform your wider industry colleagues and connections.

**Cost:** FREE to IAgrE Members – £30 for non-Members (or free if you join us)

**Booking:** <https://www.eventbrite.com/e/iagre-landwards-conference-2021-future-fuels-in-agriculture-tickets-165263155547>

## The Programme

|               |   |
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| 9.55am        | <b>Arrival</b>  |
| 10am          | <p><b>Introductory Remarks -</b><br/><b>Paul Hemingway – President IAgrE</b></p>  |
| 10.10am       | <p><b>Farmers - Fuelling the energy we need to succeed</b><br/><b>Caroline Drummond – Chief Executive LEAF</b></p> <p><i>We often forget the long history of renewable energy and how the convenience of fossil fuel derived energy has created many of the problems we face around climate change. Now is the time to accelerate the role of renewable energy on farm, building on the past, maximising the opportunities of the present and embracing the innovations and technologies of the future.</i></p> <p><i>What will a fossil fuel free farm look like in 2030?</i></p>  |
| 10.45am       | <p><b>Powered by Nature</b><br/><b>Alastair Walshaw – CNH Industrial Open Innovation</b></p> <p><i>Alistair will give an insight into the New Holland T6 Methane powered tractor and explain how it supports the road to a carbon neutral farming cycle.</i></p>  |
| 11.20-11.30am | <b>Short Break</b>  |
| 11.30am       | <p><b>Waste to Power – Upcycled Biomethane Energy Systems</b><br/><b>Chris Mann – Chairman and Chief Technology Officer – Bennamann Ltd</b></p> <p><i>Bennamann has recently demonstrated the World's first end to end cow slurry to vehicle fuel suite of products and services on a Cornwall Council tenant dairy farm. The system uses a novel sealed slurry lagoon that captures the fugitive methane, ammonia and NOX that would be otherwise emitted to the atmosphere, thereby dramatically reducing the farms greenhouse gas emissions and associated carbon footprint. This talk will give an overview of the systems benefits and its operation</i></p> |
| 12.05pm       | <p><b>Electricity &amp; Hydrogen - potential future energy sources for Agricultural machines</b><br/><b>Jarno Ratia – Global Engine Product Management Director AGCO Power</b></p> <p><i>Jarno's talk will cover Emission legislation - now and in the future and Future fuels - their benefits and pitfalls</i></p>  |
| 12.40pm       | <p><b>The challenges and practicalities of decarbonisation in Horticulture</b><br/><b>Jon Swain – Technical Consultant NFU Energy</b></p> <p><i>Jon will explore the challenges of achieving Net Zero by 2040 and discuss how to develop a Net Zero energy strategy</i></p>   |

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| 1.15-1.45pm | Break for Lunch  |
| 1.45pm      | Q&A and Speaker Panel Discussion hosted by Andy Newbold, FarmSmart |
| 2.30pm      | Close and thanks<br>Charles Nicklin CEO IAgrE                      |