



# Agritech

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*The plant group at Essex is working with farmers and growers to find new ways of improving crop yield, thanks to a deeper understanding of photosynthetic and plant responses to the environment.*

## Plant productivity expertise

We have one of the UK's leading plant productivity research groups with impressive credentials in the area of plant research. Our specialist research can be applied to increase plant productivity and yield: through improving photosynthesis, plant water use efficiency and the ability of plants to sense and respond to abiotic and biotic stresses. An important strand of our research is the development of new technologies enabling novel approaches to measuring plant performance.

Our expertise is supporting growers and farmers, alongside suppliers to the agricultural industry, in areas such as supplementary lighting, irrigation and monitoring plant performance. We are actively researching into approaches to boost plant productivity, working with growers in East Anglia. Novel aspects of our work include the application of synthetic biology approaches to manipulate light receptors and fluorescent protein biosensors.

We're also advising on how plant physiological techniques can provide new information to guide practical approaches to year-round growing. Plus, we're in discussion with a robotics company to scope the potential use of drones in improving crop productivity by identifying unwanted contaminating crops for removal.

**Fresh  
thinking,  
to help your  
organisation  
flourish.**





## Pick of the crop

Since 2012 we have been involved in a major \$25 million plant research project funded by the Bill & Melinda Gates Foundation to explore new ways to improve plant photosynthesis for increased food productivity for developing countries.

We're also part of a multi-million-pound global research initiative with the International Wheat Yield Partnership to tackle the challenges of feeding a fast-growing global population. We have industrial partnership awards with the aim to find novel genes to improve yield in wheat. Our Plant Science group is also a key player in a € million EU-funded programme on the fast tracking of novel genes from model legumes to crops for breeding resistance to disease in combination with drought stress.

**Find out more about how our experts in agritech and plant productivity can add fresh thinking to help your business flourish.**

### Contact

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**We are here to help agriculture embrace the new world of agritech with our knowledge, research and insights.**

**Potential applications include:**

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- Advanced monitoring techniques to determine crop performance and plant health.
- Manipulation of plant growth and post-harvest performance.
- Genome-wide and computational methods for discovering and exploiting traits for molecular breeding programmes.

