EVENT REPORT

THE BIG DEBATE 2026: Norfolk Farming in Turbulent Times – Do High-Input Systems Still Make Sense?

Panel speakers:

- **Harry Barnett,** Director, Holkham Emerald
- **John Barrett,** Chief Agricultural Officer, AF
- **Sheener Ooi,** Chief Financial Officer, Dyson Farming

Respondents:

- **Prof. Andrew Lovett,** School of Environmental Sciences, UEA
- **Ben Goldsborough,** MP for South Norfolk, member of Labour Rural Research Group

Chair: **Emily Norton**, RNAA Trustee and Chair AHDB

Introduction: **Prof. Julian Blow**, UEA Pro Vice Chancellor (Research and Innovation)

Summary

Farming, research and policy leaders explored how UK agriculture can remain resilient in the face of economic, environmental and technological change, and in particular, what the impacts are for Norfolk's high-input farming systems.

The panel discussed how farmers can improve efficiency through better use of data, innovation and targeted inputs to enhance productivity, profitability and environmental outcomes. Speakers agreed that future success will depend on commercially sustainable, science-led farming systems, underpinned by collaboration, research and the confidence to adapt to changing market and policy conditions.

Opening Remarks

Against a backdrop of growing global uncertainty, the debate opened by considering how farming businesses should respond to a more volatile operating environment. The discussion focused on whether future systems should prioritise higher inputs and productivity or lower dependency and resilience, and how businesses can make the best use of available resources.

Emily Norton, Chair of AHDB and RNAA Trustee, welcomed the panel and **Professor Julian Blow, Pro Vice-Chancellor (Research and Innovation)** at the University of East Anglia (UEA), on behalf of UEA as sponsors of the event. Professor Blow highlighted the importance of farming to Norfolk and the region. UEA, as a civic university, and the Norwich Institute for Sustainable Development are working collaboratively with the farming sector to respond to the needs of the region and create practical solutions, inform policy and support innovation for the future.



L-R: Panel: John Barrett, Harry Barnett, Sheener Oooi, Emily Norton © UEA

Q1: Which of four key farming inputs — fertiliser, crop protection chemistry, diesel or data — would you be most able to operate without over the next five years?

The opening question highlighted the changing role of inputs in modern farming. **Sheener Ooi** said she would retain data over all the others, as it enables better targeting and more efficient use of other resources. **Harry Barnett** noted that, for high-value potato production, all inputs are important but would exclude data if forced to choose. **John Barrett** selected fuel, highlighting the potential to replace diesel with alternatives such as biomethane to avoid the stark choice. The discussion reinforced that future resilience depends on using inputs more efficiently rather than simply increasing their use.

Q2: What have the last five years revealed about farming economics, and what has changed in recent months?

The discussion highlighted a period of sustained volatility for farming businesses, driven by global events, inflation, input price fluctuations and changes to agricultural support. **Sheener** described volatility as the "new normal", with businesses increasingly relying on data to identify trends, support decision-making and improve performance. The focus has shifted from simply maximising yield towards improving profit margins by understanding which crops and fields deliver the greatest commercial return.

Harry reflected on the impact of COVID, inflation and the war in Ukraine, noting that high commodity prices initially masked underlying challenges. He highlighted uncertainty over future support and the need for businesses to become more resilient and less reliant on government funding. At Holkham, this has driven investment in high-performing crops, stronger customer partnerships and greater value creation.

John highlighted the reduction in government support as one of the biggest changes affecting farm businesses. He noted that previous high prices had hidden structural challenges, but businesses are now more exposed and must operate successfully without relying on subsidy.

Q3: What have you stopped, started or changed in response to the latest crisis?

Harry argued that the sector must move beyond the old assumption that high inputs guarantee high outputs. He said Holkham builds productivity through skilled teams, improved crop varieties, holistic farming systems and trusted customer relationships. Greater volatility has also led to underperforming fields being removed from production.

Sheener explained how Dyson Farming now uses field-level data on labour, machinery, fuel and inputs across whole rotations to plan several years ahead, ensuring crop choices reflect future market conditions and profitability.

The discussion further explored whether technology reduces dependence on high-input systems or simply manages them more efficiently. The panel agreed that data and precision farming improve targeting, but **John** stressed inputs must match output value, with weather remaining a major influence on yield.

Q4: Does input volatility drive farming towards higher return production or lower-dependency systems?

The discussion explored the balance between intensive production on the most productive land ("land sparing") and approaches that integrate nature more closely within farming systems ("land sharing").

Harry said Holkham remains supportive of a *land-sparing* approach, arguing that retailers still require consistency and quality from food production. He described attempts to introduce more nature-focused approaches, including turning one farm into nature-friendly regenerative farming practices, but explained that this created challenges in maintaining marketable potato production due to increased pest pressure from wireworm. He argued that, while consumers support nature-friendly farming, they are unwilling to accept reductions in food quality.

John suggested that the choice does not need to be binary. He argued that economics should remain central and that approaches such as improved use of organic manures can reduce costs while maintaining productivity. **Emily** noted that at the Agriculture and Horticulture Development Board, which she chairs, the focus is still most often on maximising yield.

The discussion highlighted a wider challenge for agriculture: aligning environmental ambitions, consumer expectations and commercial realities. The panel suggested that future resilience will depend on improving efficiency, targeting inputs more precisely and ensuring that farming systems remain economically viable.

Q5: How can farmers improve efficiency, reduce dependency and prepare for the future?

Responding to **Emily's** observation that modern machinery often has significant unused capability, **Sheener** argued that the priority is not simply adopting more technology but capturing the right data to identify where improvements will have the greatest commercial impact. A lower-tech system, she suggested, is not a disadvantage if businesses understand where investment will deliver the greatest benefit.

On reducing input dependency, **John** emphasised that advisers should provide farmers with options rather than prescribe solutions, working alongside agronomists to support informed decisions. **Harry** highlighted the importance of education and encouraging teams to question whether additional cultivations, sprays or operations are genuinely needed.

Sheener described Dyson Farming's approach of bringing researchers, agronomists and farm teams together to trial new approaches, creating a culture where experimentation is encouraged and where data helps teams assess risk and make confident decisions. **Harry** added that businesses need to be willing to take risks and learn from changes that do not always succeed.

Future farming systems: land, efficiency and innovation – Research Contribution

Professor Andrew Lovett from **University of East Anglia** framed the future of agriculture and UEA's support around three key areas:



Andrew Lovett

1. **Land use –** Norfolk is uniquely placed, with around 80% of its agricultural land classified as best and most versatile, compared with around 40% nationally. If high-intensity farming is to continue, Norfolk is one of the regions that is best suited. Research into land use, policy and farming systems will be important in balancing productivity and environmental goals.
2. **Efficiency -** Improving carbon and water efficiency is essential. By combining expertise from School of Environmental Sciences and the Business School at UEA, research is helping to translate sustainability improvements, such as carbon accounting, into practical benefits for farmers.
3. **Future adaptation –** Preparing for the 2030s will require advances in plant breeding, genetics and climate adaptation to maintain productivity under changing conditions. This research is underway with the Norwich Institute for Sustainable Development and the John Innes Centre.

Building on Andrew's words, the panel discussed examples of adaptation already taking place. **Harry** described changes at Holkham, including introducing onions into rotations in response to warmer, drier conditions. **Sheener** highlighted wheat and potato trials focused on crop genetics and performance. **John** reinforced the importance of plant breeding innovation but also noted that a relatively old wheat variety (Extase), and a new variety (Defiance) are both doing well with reduced or zero chemical inputs.

The panel concluded that future resilience depends on combining data, skilled people, scientific innovation and long-term planning to develop farming systems that remain productive and adaptable.

AUDIENCE ENGAGEMENT



Audience Q1: George Freeman MP - UK global position

George Freeman MP stressed boosting food production while protecting the environment, asking how the UK compares internationally. **Harry** said the UK excels in technical expertise but is constrained by scale, energy costs and competitiveness, citing his US and Canada experience. **Sheener** highlighted economies of scale as a challenge, while **John** said UK agriculture should compete through higher-value products.

Audience Q2: Emma Webb - nutrition in food

Emma Webb asked how to improve nutritional quality without reducing yields. **Sheener** said Dyson Farming is prioritising nutrient density as consumer diets evolve. **Harry** noted yield has traditionally driven crop breeding, though this is changing. **Emily** said research can support this transition, but market demand will be critical.

Audience Q3: Eliot Lyne - food system/ecosystem services

Eliot Lyne argued that food systems should deliver for nature, water, health and productivity together. **Harry** said farmers can provide environmental benefits, but consumers must also accept less uniform produce.

Audience Q4: Bahar Ghezelayagh - food waste

Bahar Ghezelayagh questioned whether food is undervalued. **John** linked waste to consumer demand and reliance on food imports, while **Emily** called for better resource use, positive attitudes and whole-system solutions.

Audience Q5: David Webster - communicating farming

David Webster asked how farming can better explain its role to the public. **Harry** highlighted education work at Holkham, while **Sheener** emphasised Open Farm Sunday and public engagement to showcase modern farming.

Audience Q6: Max Craven – policy priorities

Asked which policy could improve food security, profitability and the environment, **John** highlighted soil health and productivity, adding that consumer demand will increasingly drive change. **Harry** stressed educating young people about farming.

Audience Q7: Mike Mack - attracting younger generations

Asked about the issues of succession and how to attract young people to farming, **Sheene**r highlighted graduate recruitment and developing talent early at Dyson Farming. **John** noted that although farm owners are often older, many operational roles are carried out by younger people.

Audience Q8: -role of the new biological inputs in farming

John said biological products should be judged by outcomes rather than replacing one set of inputs with another, with unnecessary treatments avoided where management delivers results.

Audience Q9: Peter Craven – components of future successful agribusiness

Peter identified nutrient density as a major opportunity. **Harry** said successful businesses will be more self-reliant and customer-focused, while John highlighted openness to change.

Audience Q10: Saskia Hervey – precision breeding in farming futures

Saskia Hervey raised precision breeding as a future solution. **Sheener** supported greater collaboration, and **Emily** suggested variety testing could include nutritional performance alongside yield.

Audience Q11: Martin Collinson - rethinking 'waste'

Martin Collinson suggested viewing waste as a resource. Harry highlighted circular farming systems and better integration of livestock and arable farming. **Sheener** stressed using only necessary inputs, while **Emily** noted that controlling input costs is key to farm profitability.



Closing Remarks: Ben Goldsborough, MP for South Norfolk

Ben Goldsborough MP thanked UEA and the panel, reflecting on the challenges and opportunities facing agriculture. He emphasised the need to bring consumers with farmers and ensure the sector has the tools and technologies required to adapt. He highlighted the importance of place-based solutions, recognising that farming challenges differ significantly between regions. He also stressed the importance of precision breeding (given his constituency of South Norfolk) as an opportunity to strengthen global food security, improve agricultural resilience.

Closing the debate, Emily Norton thanked the speakers, Natasha Grist and the University of East Anglia, the Royal Norfolk Agricultural Association and those who contributed to the **Round Tables**, highlighting the importance of continued collaboration and knowledge exchange across the sector.

Report Production

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- Steering Group: Poul Hovesen, Mark Nicholas, Emily Norton, Bob King and Natasha Grist

The Big Debate was hosted by the Royal Norfolk Agricultural Association (RNAA) at the Royal Norfolk Show 24-25 June 2026. The Big Debate is part of the RNAA's Food, Farming and Environment Forum initiative which provides a platform for knowledge exchange and thought leadership activities. These range from the Norfolk Farming Conference, a major regional event held in February each year, to smaller scale focused round-table discussions on industry challenges and opportunities. For further information about who we are and what we do visit https://rnaa.org.uk/.

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