



How will AI redefine what's possible for a profitable, climate-smart, nature-positive agri-food system?

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From left to right: Martin CLOUGH, Ethan SOLOVIEV, Jessica AGNEW, Stephen SACKUR, Justin ROSE

The final panel turned to artificial intelligence – and whether it can genuinely redefine what is possible for a profitable, climate-smart, nature-positive agri-food system.

AI for policymakers, not just farmers

A gap in the current AI landscape was highlighted by Jessica AGNEW, Director of the GAP Initiative and Managing Editor of the Global Agricultural Productivity Report at Virginia Tech. Only around 5% of AI solutions being developed for agriculture are targeted at decision-makers rather than at farm level. Policymakers, ministers and development banks are still operating with fragmented and out-of-date data – making decisions by intuition despite the technologies available. The GAP Initiative is working on a platform integrating total factor productivity data with climate, economic and other datasets, designed around user experience. (...).

Data as a new crop

Data was also the topic for Ethan SOLOVIEV, Chief Innovation Officer at HowGood. His organisation is the world's largest database for food and agriculture sustainability, tracking the carbon footprint, water footprint, biodiversity impact, labour risk and animal welfare credentials of 33,000 ingredients and around 4.5 million products globally, for clients ranging from Danone and Nestlé to major retailers.

Farmers should be able to own their data and be compensated for it, he said – “data can be a new crop”. With data, agriculture is uniquely positioned among economic sectors to move from being a source of emissions to a net carbon sink, through regenerative approaches that simultaneously enhance biodiversity and improve farmer livelihoods.

Agricultural intelligence

An optimistic perspective came from Martin CLOUGH, Head

of Digital, Collaboration and Sustainability in Crop Protection Research at Syngenta. He saw this as an “epic time” to be in research and development, driven by the convergence of generative AI, big data capability and breakthroughs in ‘omics’ science – the understanding of how chemistry and biology interact.(...) He likened it to a Rubik’s Cube: solving one side at a time inevitably scrambles the others, whereas AI allows all sides to be solved at once. He saw potential to cut years off the time-to-market for new products, delivering more and better solutions to farmers faster.

From horsepower to smart power

Justin ROSE, President of Worldwide Agriculture and Turf, Small Agriculture and Turf Care, Europe, Africa and Asia, at Deere & Company, joining from the company’s headquarters in Illinois, said AI is already reshaping what happens in the field every day – a shift “from horsepower to smart power”.

Why is this important? He gave a striking illustration: in Europe, 23 trillion individual weed plants must be controlled every year to protect small grain cereal and oilseed crops. Research shows that weeds cover only 1-5% of arable land – but today, farmers broadcast-spray entire fields with herbicides. Deere’s AI-enabled sprayer can identify individual weeds and apply herbicide only where needed (...).

The discussion: accountability, data and the social media lesson

Stephen SACKUR drove the discussion with a pointed challenge: are we at a naively optimistic stage in our relationship with AI, one that mirrors the early days of the internet and social media? The question for agriculture is who controls the technology, who benefits, and how much autonomy stays with farmers.