

Farming can be more sustainable without cutting yield or profit

I enjoyed your article “Rethinking farming in an era of global crises” (Big Read, October 10) and the discussion of the benefits of regenerative agriculture. But moving from high-yield conventional agriculture to regenerative techniques requires a two to five year transition period and a fall in crop yields of approximately 29 per cent, according to research by Claire LaCanne at the University of Minnesota Twin Cities and Jonathan Lundgren, director of Ecdysis Foundation, a non-profit

organisation with a mission to save the planet by reforming our food system.

Regenerative crops may be more profitable when sold at a premium to high-end consumers, but they don’t represent an economic option for all food production yet. For farmers operating on thin margins the transition period and lower yields are difficult to manage without subsidies or government assistance.

Conventional high-yield agriculture also has options to evolve further. As an example, today “selective”

herbicides are blanket sprayed across fields two to five times a growing season, depending on the crop type, to kill weeds without impacting the crop.

But by applying new techniques it is possible to reduce herbicide use by 80-95 per cent, while increasing conventional crop yields by more than 5 per cent, increasing biodiversity and saving around 200kg of CO₂ per hectare – all because crops and soil not sprayed with herbicide perform better.

Here at Ecorobotix we use machine learning for plant recognition paired

with ultra-high precision spraying to only treat weeds and not spray surrounding crops and soil.

This type of ultra-high precision technique also applies to insecticide, pesticide, organic products and liquid fertiliser use (saving around 20 per cent in most cases) with the potential to render conventional agriculture massively more sustainable without any yield loss or profitability decline.

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