## European farms could grow green and still be able to feed population

Research shows loss in yields could be offset by reorienting diets away from grain-fed meat

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Farmer on tractor harvesting organic potatoes. Photograph: Cultura Creative (RF) / Alamy/Alamy

Europe would still be able to feed its growing population even if it switched entirely to environmentally friendly approaches such as organic farming, according to a new report from a thinktank.

A week after research revealed a steep decline in global insect populations that has been linked to the use of pesticides, the study from European thinktank IDDRI claims such chemicals can be phased out and greenhouse gas emissions radically reduced in Europe through agroecological farming, while still producing enough nutritious food for an increasing population.

Agroecology takes into account natural ecosystems and uses local knowledge to plant crops that increase the sustainability of the farming system as a whole. The IDDRI study, entitled *Ten Years for Agroecology*, used modelling to examine the reduction in yields that would result from a transition to such an approach.

Reductions, the authors argue, could be mitigated by eliminating food-feed competition – reorienting diets towards plant-based proteins and pasture-fed livestock, and away from grain-fed white meat. More than half the EU's cereals and oilseed crops are fed to animals. The study models a future in which European meat production has been cut by 40%, with the greatest reductions in grain-fed pork and poultry.

"Pesticide-hungry intensive production is not the only way to feed a growing population" said Rob Percival, the head of food policy at the Soil Association. "The Ten Years for Agroecology study shows that agroecological and organic farming can feed Europe a healthy diet, while responding to climate change, phasing out pesticides, and maintaining vital biodiversity."

The study suggests that agroecology — using ecological principles first and chemicals last in agriculture — presents a credible way of feeding Europe by 2050. But it says action is needed now, with the next 10 years critical in engaging Europe in the transition. The agriculture bill now going through parliament in the UK makes no mention of agroecology, although an amendment drafted by a cross-party group of MPs proposed that farmers using the approach should receive some sort of payment.

"The idea of an entirely agroecological Europe is often considered unrealistic in terms of food security because agroecology sometimes means lower yields," said Percival. "But this new research shows that by refocusing diets around plant-based proteins and pasture-fed livestock, a fully agroecological Europe is possible."

The study is being published in parallel with the UK launch of the Eat-Lancet "planetary health diet", which proposes a shift towards a more plant-based diet. The agroecology study addresses similar concerns, but places greater emphasis on farmland biodiversity.

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