

# New research links crop disease and climate change

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Researchers from the University of Hertfordshire have investigated links between crop disease and climate change which impact our food growth and production - affecting our food security today and for future generations. The team of researchers led by Professor Bruce Fitt, at the University of Hertfordshire, in collaboration with Professor Jon West at Rothamsted Research and Dr. Rob Carlton of Carlton Consultancy, describe their investigations in two papers to be published in a special edition of *European Journal of Plant Pathology*.

“Currently, there is considerable debate about climate change adaptation and mitigation in relation to controlling crop disease, while also maintaining sufficient food production,” said Professor Fitt, a leading authority on plant pathology. “Government policy and the agricultural industry need to prepare for the impacts of climate change particularly where food production is likely to be adversely affected. Strategies for adaptation to climate change are needed to maintain good disease control and crop yields while at the same time decreasing greenhouse gas emissions.”

The research team used a novel approach of comparing pathogen biology to review environmental factors that influence the severity of crop disease epidemics. This assessed the effects of climate change on crop diseases and, ultimately, the crop yield. The team also found that good crop disease control contributed to [climate change](#) mitigation by decreasing agricultural greenhouse gas emissions.

In further research on [crop disease](#) control, the team compared greenhouse gas emissions and crop production associated with selected arable systems. Results showed that conventional crop production, combined with reduced tillage cultivation, is generally the best for producing high crop yields. This contributes to global [food security](#) and minimising greenhouse gas emissions.

**More information:** The full research papers can be viewed online at the European Journal of Plant Pathology at [bit.ly/wKKJbW](http://bit.ly/wKKJbW)

Provided by University of Hertfordshire

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