

Experts embark on project to save the world from 'bananageddon'

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Panama disease, which kills banana plants, is spreading around the world thanks to increased trade and transport links between nations. Credit: University of Exeter

Experts are hoping to stop the UK's favourite fruit, the banana, from disappearing from our shops.

Fungal disease and rising costs of production threaten the supply of the most important fruit crop in the world. More than five billion [bananas](#) are purchased in Britain each year, and the UK accounts for seven per cent of the global export market.

Biologists and economists will work together to develop solutions to save banana crops from disease and help retailers cope with the impact of increased costs.

Panama disease, which kills banana plants, is spreading around the world thanks to increased trade and transport links between nations. If it spreads to more banana-producing nations there is a risk of shortages for retailers and consumers, and devastation for the millions of plantation workers, small-scale producers and their families whose livelihoods depend on the global banana trade.

Only one variety of banana, Cavendish, is internationally traded. A previous variety grown for export, Gros Michel, was eliminated by Panama disease in the 1950s. Now a new strain of the disease is spreading from Asia and threatens the production of Cavendish. If it reaches Latin America and the Caribbean supply to the EU and US could collapse. There are no alternative varieties of banana available as yet for international trade.

Biologists and economists from the University of Exeter, University of Oxford, UN Food and Agriculture Organization, the NGO BananaLink, and consultancy 3Keel will work to assess the risk of "bananageddon". They will calculate the shortages of the fruit the public and retailers can expect, the impact of [climate change](#) and disease on banana yield and supply.

Members of the research team will also undertake work to examine how to help [banana plants](#) resist [fungal disease](#). They will work with retailers to develop new economic models of pricing bananas and examine how consumers will respond to changes in price. They will also work with public health bodies to examine the impact on people's diets if bananas were less readily available.

The three-year project, which begins this month, has been given £1.2m of funding by partners including the Biotechnology and Biological Sciences Research Council (BBRSC).

Dr Dan Bebber, who is leading the study, said: "We want to estimate the impact of the various biological and economic shocks on the cards for [banana production](#), and develop strategies to reduce the impact of diseases and climate change on production.

"We believe there would be [public health](#) implications if bananas became more expensive, as people might switch to less healthy snacks, along with serious economic impacts on producers in the developing world."

Dr Adam Staines, from the BBSRC, said: "The threat of crop diseases and the potential for one disease to wipe out an entire crop supply chain is ever increasing with globalisation, changing climates, resistance to antimicrobial agents, and reliance on a more narrow diversity of crops; and as such addressing crop diseases are a key priority area for BBSRC and the other funding partners.

"Bananas are an excellent source of nutrition for the UK and globally, and an economically important crop in many countries. By using a truly multi-disciplinary approach, this research will provide an understanding of future disease threats, work on potential new anti-fungal agents to stop these diseases, and understand the socio-economic context of disease outbreaks."

Provided by University of Exeter

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