

Sussex fungicides may help fight ash dieback

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A new fungicide treatment developed at the University of Sussex is emerging as a weapon in the fight to inhibit growth of *Chalara fraxinea*, which causes ash dieback, according to initial trials at The Sainsbury Laboratory.

If developed further, it could be used to treat infected nursery stock or ash plantations that are blighted by the disease. It is more problematic to use [fungicides](#) in native woodland, where spraying is difficult and fungicides may affect beneficial fungi that help tree nutrition and healthy growth.

AOX fungicides were created in the University of Sussex laboratory of Professor Tony Moore, and have recently been subjected to independent trials in the world-renowned Sainsbury Laboratory in Norwich.

Fungal pathogens are adept at developing resistance to treatments by expressing an enzyme called the alternative oxidase (AOX). The novel compounds formulated by Professor Moore prevent this enzyme from being functional. If developed, these compounds may be effective for longer and need less frequent spraying.

The compounds were particularly effective when combined with a traditional fungicide that targets a different enzyme in the fungus. Professor Moore and his colleagues identified the current target using data made available by The Sainsbury Laboratory on infected tree samples. The data are available for other scientists to analyse on the crowdsourcing website [OpenAshDieBack](#).

Professor Moore hopes that in the future, AOX fungicides could also be used to better protect cereal crops from pathogenic fungi. As well as protecting yields, they could lessen the environmental damage caused by multiple applications. The University of Sussex is currently working with the Sussex Innovation Centre to help bring the [compounds](#) to market, and is seeking commercial partners to develop AOX fungicides for a range of applications.

Provided by University of Sussex

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