

Ash trees under threat if harmful borer beetle finds way to Britain

[John Vidal](#)

Wednesday 4 November 2015 GMTLast modified on Wednesday 4 November

Asian emerald ash borer, given the maximum risk rating to the tree species, is ‘moving uncontrolled’ through Russia having established itself in US and Canada



An emerald ash borer beetle, which may arrive in the UK in imported goods. ‘We are worried about firewood coming through the Ukraine or Baltic countries near Russia,’ said chief plant health scientist Nicola Spence. Photograph: Alamy

A tiny beetle could wipe out Britain’s ash trees much faster than the established ash dieback disease which is expected to eventually kill millions of the trees, according to the government’s leading authority on pests and pathogens threatening UK forests.

“The emerald ash borer is moving uncontrolled through Russia. It flies long distances, moves quickly and can reproduce in the UK,” said Nicola Spence, chief plant health scientist. The beetle has not yet arrived in the UK, but she warned: “There is a high risk of it being introduced and establishing itself.”

According to Prof Spence, the ash borer is now top of the UK’s plant risk register, which now counts 811 pests and diseases threatening trees and plants. While ash dieback disease, or chalara, has been given a score of 100 out of 125 as a relative risk, ash borer disease registers the maximum 125.

According to the forestry commission, the borer beetle, which is native to Asia, kills trees in two to three years and has established itself across many thousands of square miles of the US and Canada.

It has also reached the Moscow region of Russia where it is spreading west and south at a rate of 25 miles a year. It is likely to have arrived in North America in imported wooden packing material.

The beetle, which is difficult to detect, could arrive in EU countries via imported firewood, said Spence. “We have identified the risk pathways of [how it could arrive in Britain]. We are worried about firewood coming through the Ukraine or Baltic countries near Russia,” she said.

She added that all firewood being imported into Britain will shortly be regulated and liable for inspection.

Geneticists at Queen Mary’s College, London, are racing to sequence the world’s 35 species of ash tree to identify genes that may be resistant to both the beetle and the disease. “Preliminary research suggests the

Manchurian ash 0 is the best candidate,” said biologist Richard Buggs.

With 90% of the UK’s ash trees about to be wiped out, could GM be the answer?

[Read more](#)

In addition, the Woodland Trust, forestry commission and the Earth Trust are hoping to identify resistant trees to form the basis of a nationwide tree-breeding programme.

According to Buggs, there are eight ways to respond to the disease, ranging from doing nothing and allowing resistant trees to develop, to genetic modification.

The six other alternatives include using gene markers to identify tolerance in ash trees and then growing them conventionally; propagating saplings showing tolerance; and finding genes in other species of ash tree which could be inserted in British ash trees.

No preference has been identified by the government, but a social survey of 1,400 people conducted by Oxford university showed strong opposition both to doing nothing and to genetic modification using genes from other species.

The survey also found that 83% of people questioned would be “very concerned” if ash trees disappeared from the British countryside, with only 2% said they would not mind at all.

According to Buggs, it could take several generations for ash trees to naturally develop resistance to the die back disease, compared to about 20 years if GM methods were used. “It will take about two years to find resistant genes. [But] We do not know if there is one gene that is resistant to both diseases.”

According to the forestry commission, ash dieback disease is progressing steadily through Britain. It affects the crown of trees at first, and then slowly kills the whole tree. Trees’ susceptibility to the disease depends on stress caused by drought or extreme climatic conditions.

“We don’t yet know what the full impact of chalara will be in Britain,” said the forestry commission.

“Evidence from continental Europe suggests that older, mature ash trees can survive infection and continue to provide their landscape and wildlife benefits for some time.”

<http://www.theguardian.com/science/2015/nov/04/ash-trees-under-threat-borer-beetle-britain>