

Cavendish banana could 'disappear' in the 2020s. Can CRISPR gene editing save it from a deadly fungus?

[T]hat the Cavendish banana will disappear sometime in the 2020's is extremely likely. It is being threatened by a fungus called Tropical Race 4 (TR4), which a century ago wiped out the previous commercial dessert banana, the Gros Michel (it's not extinct, but cannot be grown commercially anymore).

TR4 is now on every continent that grows bananas. It is literally just a matter of time before the entire commercial Cavendish market is wiped out.

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[One] solution is to breed or genetically engineer the Cavendish (or the Gros Michel, for that matter) to be highly resistant to TR4. Then we could at least get another century out of the banana, hopefully. A research group in Australia is working on a [CRISPR edited version of the Cavendish](#) that is resistant to TR4.

Fortunately, nature already has a partial solution – some wild type bananas have a gene, RGA2, that provides resistance to TR4. In fact, the RGA2 gene is already present in the Cavendish, it is just expressed 10% of that of the resistant varieties. So all the scientists have to do is activate the expression of the already present RGA2 genes in the Cavendish. They have done this and are already in field trials, which are showing enhanced resistance.

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