

Can genetic engineers use genes from wild bananas to save our favorite fruit?

[Editor's note: The banana, the world's most popular fruit, is sterile. They are propagated by taking either cuttings or suckers and replanting them. Therefore the banana plants that produce the familiar yellow fruits we purchase in the grocery store are essentially genetically identical. This makes them all equally vulnerable to pathogens. Prior to the 1960's the majority of the world's cultivated bananas were a variety known as Gros Michel. But Gros Michel was susceptible to a fungal disease which wiped out the crop, almost wiping out the banana industry with it. The Gros Michel variety was replaced with the variety we eat today, the Cavendish. But the Cavendish is now threatened by new fungal diseases and scientists are racing to stop history from repeating itself.]

If there's a lesson to be learned from the sad history of Gros Michel, it's that reliance on a large and genetically uniform monoculture is a risky strategy that is prone to failure. To reduce the vulnerability to diseases, we need more genetic diversity in our cultivated bananas.

Over a thousand species of banana have been recorded in the wild. ...[T]hey are an untapped genetic resource. Scientists could search within them for resistance genes and other desirable traits to use in engineering and breeding programs.

To date, though, there's been little effort and insufficient funding for collecting, protecting, characterizing and [utilizing wild banana genetic material](#). Consequently ... the banana industry has yet to benefit from genetics and plant breeding.

But we have started taking the first steps....

Researchers [now have the tools](#) to [identify resistance genes](#) in wild bananas [or other plant species](#). Then they can use classical plant breeding or genetic engineering to transfer those genes into desired cultivars....

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [With the familiar Cavendish banana in danger, can science help it survive?](#)