The world's most popular banana variety is under threat of extinction — and genetic engineering solutions are blocked. Here are alternatives.

Since the 1990s a new strain of the fungus TR1 (or panama disease), which wiped out the Gros Michel banana in the 1950s, has threatened to destroy the Cavendish variety, which represents close to 50% of the world production of bananas.

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The solution, therefore, is to promote diversity. [Banana Program Leader at Bioversity International Nicolas] Roux is calling for standardized protocols to be developed to screen all possible germplasm, with a priority on the most consumed edible cultivars (dessert bananas, plantains, etc.). Preliminary results, for example, show that several wild relatives have the genes of resistance to TR4. Classical or mutation breeding to develop a new variety that is resistant to TR4 but also accepted by the consumer, the farmer and all actors along the value chain, might take up to 10-15 years.

Other new unconventional approaches such as genetic transformation (GMO) or more recently gene editing are promising, he added, but not widely accepted. "As we are not sure that other approaches will give results, we need to investigate these new techniques at least at the research level in parallel, as they also help us better understand the genetics and biology of this very complicated crop."

This is an excerpt. Read the original post here.