

Advanced breeding could lead to virus-free cassava, saving African staple crop from extinction

“Cassava is the most important food staple in sub-Saharan Africa,” says Morag [Ferguson], a cassava specialist who [works] with [the International Institute of Tropical Agriculture’s (IITA) Nairobi office]...However...yields can be reduced strongly since the majority of cassava [varieties] are not resistant to some important pests and diseases.

In East Africa, for example, cassava brown streak disease (CBSD) can lead to a brown necrosis which makes the edible roots unmarketable. The disease is caused by at least two viruses and can lead to complete spoilage of the cassava harvest...

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“Smallholder farmers in East Africa generally use cassava [varieties] that have been selected because they are well liked,” Morag says. “But we may lose those...as very few of them have been properly conserved and are vulnerable to extinction.”

IITA has a protocol for the establishment of virus-free cassava. “It all starts in...a growth chamber,” says Morag. “We place cassava stakes in the chambers under very high heat, around 38°C for four to six weeks and wait until they sprout.” The sustained high heat slows the virus spread in the cassava tissue.

“We can then excise from the stake what we hope will be a clean part of the tissue...The excised...tip is then established in tissue culture.

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Ultimately our goal is to make virus-free and well-characterized cassava [varieties] from East Africa readily available to anyone anywhere,” says Morag. “None of that can happen until we eliminate the viruses.”

Read full, original article: [Securing East Africa’s cassava](#)