

Towards consensus on the transfer of *Fusarium oxysporum* V5w2-enhanced tissue culture banana technology to farmers through public-private partnerships in East Africa

Abstract.

Nonpathogenic strains of *Fusarium oxysporum* are promising weapons in the endophytic biological control warfare against various banana pests, especially the banana weevil *Cosmopolites sordidus* and the root endoparasitic nematodes *Pratylenchus goodeyi* and *Radopholus similis*. The fungal endophytes are reintroduced into tissue culture banana plants to restore resistance against the pests, in the innovative ‘endophyte-enhanced tissue culture banana technology’. The strain *Fusarium oxysporum* V5w2 is said to have shown great potential for development into a biopesticide for suppression of the banana pests. Various studies have evaluated *F. oxysporum* V5w2 with mixed findings, which have brought up a stalemate in consensus towards transfer of the endophyte technology to farmers. This article brings into perspective variations in research findings that are associated with endophytic control of *C. sordidus* and *R. similis* using *F. oxysporum* V5w2 in tissue culture banana. Emphasis is laid on understanding the basis of research that informed the transfer of *F. oxysporum* V5w2-enhanced tissue culture banana plants to farmers in East Africa. The objective of this article is to unlock the biotechnological stalemate on endophytic control of *C. sordidus* and *R. similis* using *F. oxysporum* V5w2 in tissue culture banana. It is concluded that, *F. oxysporum* V5w2 still remains an unidentified rhizosphere root-invading plant growth suppressive (pathogenic) endophytic microbe, which should not be registered as a biopesticide or transferred to banana farmers in East Africa and elsewhere around the world. An open debate through reliable channels of scientific communication is encouraged.

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