

Preliminary Studies of *in vitro* Stimulation of Sexual Mating among Isolates of *Mycosphaerella fijiensis*, Causal Agent of Black Sigatoka Disease in Bananas and Plantains

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Single-ascospore-derived isolates of *Mycosphaerella fijiensis* Morelet from false horn 'Ag-bagba' plantain leaves obtained from five different villages in southern Nigeria were stimulated to mate under artificial conditions. Pairs of isolates were incubated under blacklight on potato dextrose agar (PDA) with surface-sterilized plantain leaves or on PDA with autoclaved plantain leaves. Some isolates were observed to be sexually compatible by their ability to produce spherical to bulb-shaped fruiting body structures (FBS) and ascospores on pairing. FBS were observed to measure between 39–65 μm (smallest diameter) and 39–104 μm (largest diameter; mean $55.3 \times 71.1 \mu\text{m}$) in diameter, whereas ascospore lengths measured between 13.0 and 14.9 μm . Length of incubation time required for FBS production was dependent on the pair of isolates involved, the average being 40.1 days. With some pairs, ascospores were observed after 35 days of incubation.

KEY WORDS: *Mycosphaerella fijiensis*; mating; sexual reproduction; black Sigatoka; *Musa* sp.

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