

Distribution, transmission and disease characterization of sweetpotato feathery mottle virus

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ABSTRACT

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Sweetpotato feathery mottle virus (SPFMV) disease was observed in the sweetpotato fields of the Visayas State College of Agriculture and adjacent barangays with infection ranging from 2.8 to 21.0%. Likewise, in the the germplasm collection of the Philippine Root Crop Research and Training Center, 21.0% of the 1,124 sweetpotato accessions were infected with SPFMV, 8.0% of which were severely infected. Transmission studies showed that SPFMV was mechanically and biologically transmissible but not seedborne. SPFMV was mechanically transmitted to true seedlings (2-5 leaf stage) but not to vegetative cuttings and tuber sprouts. It was also non-persistently transmitted by the melon aphid (*Aphis gossypii* Glover). The acquisition feeding and inoculation feeding periods of the aphid were 5-6 sec and 15-60 sec, respectively. Serial transmission trials revealed that the insect could transmit the disease up to 5 plants after a single acquisition feeding only. There were two strains of SPFMV based on disease symptoms in sweetpotato and in reaction to certain host plants. Both strains showed similar transmissibility and physical properties *in vitro*.

Keywords: disease characterization. survey. sweetpotato feathery mottle disease. transmission.

INTRODUCTION

Sweetpotato [*Ipomoea batatas* (L.) Lam] contributes substantially to the food and feed requirements of human beings and animals. However, the