OCCURRENCE OF A CHLOROTIC SPOTTING DISEASE ON SOME ViSCA SWEET POTATO HYBRIDS

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A chlorotic spotting disease of sweet potato was observed during inspections conducted in September 1984 on the sweet potato varieties and hybrids grown in the experimental field of the Visayas State College of Agriculture (ViSCA), Baybay, Leyte, Philippines. The disease is believed to be caused by a virus. It was found to occur on variety VSP-2 and the hybrids V_7-27, V_5-88, V_3-44 and V_3-180.

Infected newly formed leaves of VSP-2 sweet potato variety showed systemic interveinal chlorotic spots while ring-spotting with indistinct borders appeared on older, fully expanded leaves (Fig. 1).

On the hybrids V_7-27, V_3-44 and V_3-180, systemic interveinal chlorotic spots on the newly opened leaves were evident (Fig. 2) while ring spotting which later on coalesced, giving a mild mottled appearance was noted on fully expanded leaves. Formation of lateral buds was enhanced especially on V_7-27 plants.

Interveinal chlorosis to mottling was observed in newly opened leaves of V_5-88 sweet potato hybrid. Older leaves showed faint veinal chlorosis.

The ring spots usually faded 2-4 weeks after first appearance.

Preliminary transmission studies conducted by the authors revealed that the disease was transmitted mechanically and biologically by the cotton aphid (*Aphis gossypii* Glover) to healthy VSP-2 and V_7-27 plants.

This is the first time that the chlorotic spot disease of sweet potato was observed and reported to occur in ViSCA sweet potato hybrids in the Philippines. However, Benigno et al. reported a mosaic-type disease of sweet potato in 1974. It is necessary that studies on transmission, host range, physical properties, serology and electron microscopy be conducted to determine the identity of the virus.

Fig. 1. Sweet potato (VSP-2) plant showing chlorotic ring spotting on fully expanded leaves.

Fig. 2. Sweet potato (V_7-27) plant showing interveinal chlorotic spots on newly opened leaves.

Fig. 3. Healthy sweet potato (V_7-27) plant.

LITERATURE CITED

BENIGNO, D. A., QUEBRAL, F. C., PUA, D. R. and SORIA, A. J. 1974. Unreported virus disease of upland root crops in the Philippines. 5th Natl. Pest Control Council Conf. May 8-10, 1974. Davao City, Philippines.